LIBRARY OF THE

AMERICAN JOURNAL OF PHARMACY

PUBLISHED MONTHLY BY THE

Philadelphia College of Pharmacy

PUBLICATION COMMITTEE

SAMUEL P. SADTLER, PH.D., LL.D. CHARLES H. LAWALL, PH.M.
JOSEPH W. ENGLAND, PH.M. GEORGE M. BERINGER, PH. M.
JOHN K. THUM, PH.M.

GEORGE M. BERINGER, A.M., PH.M., Editor

VOL. 91 90 FEBRUARY, 1918 No. 2

REMINGTON MEMORIAL NUMBER

CONTENTS

MEMOIR, Professor Joseph Price Remington. By Charles H. LaWall, Ph.M. . . . 65
A Letter to the Editor—Relating to Prof. Joseph P. Remington. By John Uri Lloyd, Cincinnati, Ohio . . . 73
The Funeral of Professor Joseph P. Remington . . . 78
The Memorial Meeting to Professor Remington . . . 79
Telegrams Received by the College and Mrs. J. P. Remington . . . 103
Communications Received After the Memorial Meeting . . . 108
Action taken by The National Drug Trade Conference . . . 109
Meeting of The New York Branch of The American Pharmaceutical Association. By Hugo Schaefer, Secretary . . . 111
Editorial . . . 119
A Great Leader Has Passed Away . . . 121
Evidence of Bureaucracy and Inefficiency in Governmental Departments . . . 122
The Laboratory in War Time. By Dr. Fred B. Kilmer, New Brunswick, N. J. . . . 122
A Process for the Deodorization of the Cresols. By James F. Couch, Washington, D. C. 128
The Metric System and International Standardization. By Herbert T. Wade . . . 131
Methods of Making Soya-Bean Oil in Manchuria. Report by Consul A. A. Williamson, Dairen . . . 139
Philadelphia College of Pharmacy . . . 142
Minutes of the Quarterly Meeting . . . 142
Minutes of the Special Meeting of the College, January 2, 1918 . . . 143
Minutes of the Adjourned Special Meeting, January 4, 1918 . . . 143
Correspondence . . . 145
Compilation of Digest of Comments on the U. S. P. and N. F. Continued . . . 145
U. S. Department of Agriculture, Correction of Error in Assay of Mustard . . . 147
Book Reviews . . . 152
News Items and Personal Notices . . . 153
Obituary . . . 157

Price, $3.00 per Annum, in advance. Issued in Monthly numbers of not less than 48 pages. Single Numbers, 30 Cents. Back Numbers, 50 Cents.

Address all communications

For the Editor: To American Journal of Pharmacy, 145 North Tenth Street, Philadelphia, Pa.

For the Business Manager: To Harold J. LaWall, Business Mgr., 145 North Tenth Street, Philadelphia, Pa.

Publication Office—41 North Queen Street, Lancaster, Pa.

Entered as second-class matter February 14, 1917, at the Post Office at Lancaster, Pa., under the Act of March 3, 1879.

☞Our Readers will find it to their advantage to carefully consult the advertising pages when dealing to correspond with STRICTLY FIRST-CLASS PARTIES

IN ACTIVE PREPARATION

NEW EDITIONS OF STANDARD WORKS FOR STUDENTS AND PHARMACISTS

REMINGTON'S PRACTICE OF PHARMACY

Sixth Edition

All the Best Features in the Fifth Edition are retained and many new ones added. Based upon the latest revision of the U. S. Pharmacopoeia (IX) and the National Formulary (IV) is now being printed. The "New Remington" may be had in two volumes for the convenience of students or in one complete volume. Volume I will soon be issued. Volume II and the whole book in one volume will follow immediately. Two styles of binding—a new Buckram binding, which is very durable, and the regular cloth binding.

THE INDISPENSABLE

UNITED STATES DISPENSATORY

New 20th Edition

THE EDITORIAL STAFF

PROF. JOSEPH P. REMINGTON — PROF. H. C. WOOD, JR., M.D.
PROF SAMUEL P. SADTLER, Ph.D. — PROF. HENRY KRAEMER, Ph.D.
PROF. CHAS. H. LAWALL, Ph.D.

Based on the new U. S. Pharmacopoeia and the new National Formulary. Printed from new double column plates. Will contain hundreds of new articles besides the official ones. All the valuable features in the old book are retained. Octavo. Bound in durable buckram, $10.00 net.

ORDER FROM YOUR WHOLESALE DEALER, OR THE PUBLISHERS

J. B. LIPPINCOTT COMPANY, Philadelphia

American Journal of Pharmacy

ESTABLISHED IN 1825

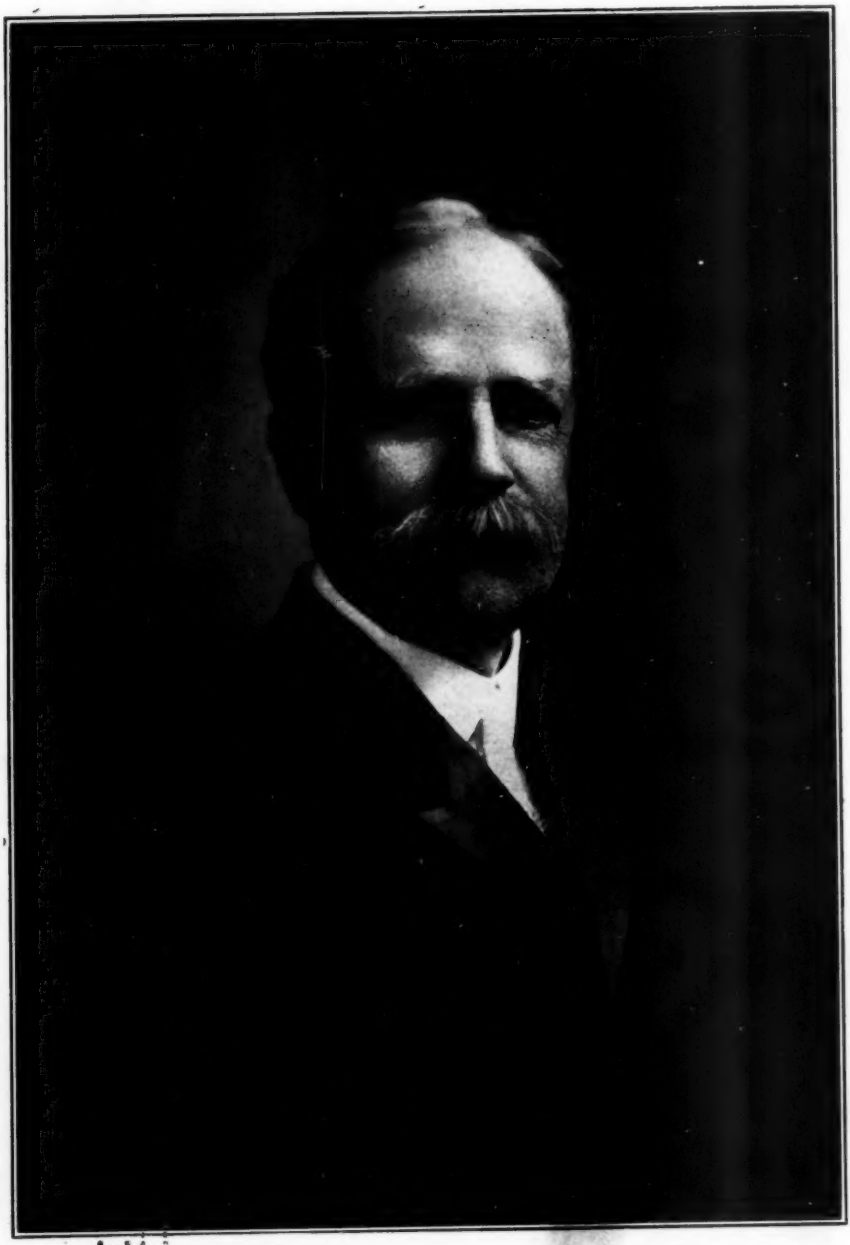
Four preliminary numbers were published at different times until in 1829, when the publication of the regular volumes began. Since then the publication has been uninterrupted. During the period from 1829 to 1852 four numbers were published annually, except in 1847, when five numbers were published. From 1853 to 1870 six numbers were published. Since this time twelve numbers have been published annually.

MANUSCRIPTS should be sent to the Editor. It should be stated in this connection that the Editor does not assume any responsibility in connection with the views or investigations of contributors, other than to exercise general care in the selection of matter.

Contributors are allowed a reasonable number of copies of this JOURNAL, free of charge, if applied for when the proof is returned.

REPRINTS, if desired, must be applied for when the proof is returned. The table below shows the *approximate* cost of reprints, the make-up of the pages to be identically the same as in the JOURNAL. The actual cost may vary from the figures given, and will depend upon the amount of presswork, paper, binding, etc. Reprints containing half-tones may be expected to cost somewhat more than the rates given.

	2 pp.	4 pp.	8 pp.	16 pp.	COVERS WITH TITLES
25 copies	$2.25	$3.75	$7.75	$9.00	25 copies $1.75
50 "	2.50	4.00	8.25	9.75	50 " 2.00
100 "	2.75	4.25	9.00	10.75	100 " 2.25
250 "	3.75	4.75	10.00	12.00	250 " 2.75



Joseph F. Remington

THE AMERICAN
JOURNAL OF PHARMACY

FEBRUARY, 1918

PROFESSOR JOSEPH PRICE REMINGTON.

By Charles H. LaWall, Ph.M.

"He who influences the thought of his time influences the thought of all the time that follows. And he has made his impress upon eternity."

Professor Joseph Price Remington is dead. On January 1, 1918, Atropos severed the thread of a life which has meant much to pharmacy. Clothos' distaff bore the unsullied skein which Lachesis had measured for more than seventy years.

It is difficult, indeed, to correctly estimate the value of a man's services to the world before time has developed the true perspective, but there will be none to challenge the statement that for a period of at least twenty-five years, Professor Joseph P. Remington was the foremost figure in American pharmacy. Genial and eloquent, a keen student of human nature, a lover of the beautiful in art, music and literature, possessed of a fund of scientific knowledge of unusually broad scope, and with it all a consciousness of power that made him an acknowledged leader among men—these are some of the qualities that were combined in him to make a great teacher, a capable executive and a Christian gentleman, clean-minded and clean-hearted.

He was the descendant of early Philadelphia Quaker stock, his ancestors for three generations having been residents of that city and members of the Society of Friends. His father was Dr. Isaac Remington, a well-known Philadelphia physician. His mother was the daughter of John Hart, who was a descendant of Townsend Speakman, an apothecary in Philadelphia early in the eighteenth century, and the sign from this old store was given a prominent place in Professor Remington's private office at the Philadelphia College of Pharmacy.

He inherited a liking and an aptitude for scientific study, and when but a small boy had equipped a chemical laboratory in which most of the apparatus was of his own devising and construction. In the collection at the College is a Liebig condenser made by him at the age of twelve, out of a tin roll-plaster case, two heavy rubber washers and several pieces of glass tubing, which has done service in lecture counter experiments for more than fifty years.

His father died when Joseph Remington was but fifteen years of age. The plans which had been made for him to obtain an academic college degree were abandoned. He received his preliminary education in private schools, and in the Philadelphia Central High School. At the time of his father's death, the members of his family wished him to take up the study of medicine, but he decided that he preferred to study pharmacy instead. It was a decision purely his own and tis wisdom is confirmed by his subsequent brilliant career in the profession of his choice.

January 1, 1863, exactly fifty-five years before the day of his death, he entered the establishment of Charles Ellis, Son & Co., a prominent firm of wholesale and retail druggists of that time in Philadelphia. He was guided in his choice of a preceptor by his brother-in-law, Henry M. Troth, the son of one of the founders of the Philadelphia College of Pharmacy. His experience at the Ellis store covered an unusually wide range, even at that time, for the firm was one that did a great deal of manufacturing on what was then considered a very large scale. He was fortunate in the fact, too, that Mr. Charles Ellis, the head of the firm, and at that time the president of the Philadelphia College of Pharmacy, took a more than ordinary interest in him and encouraged him to attend the lectures at the college during the years of his apprenticeship. The lectures at that time were given in the evenings and the course was of two years' duration. At the commencement exercises held in 1866, Joseph P. Remington was graduated from the institution in whose service he was destined to spend so many useful years and was awarded the degree of Ph.G. Curiously enough and prophetic in its significance, the title of his graduating thesis was "Our Alma Mater, Its Rise and Progress."

In January, 1867, Professor Remington left Philadelphia to enter the employ of Dr. E. R. Squibb, then the foremost manufacturer of chemicals and pharmaceuticals in the United States.

His experience with Dr. Squibb afforded an unusual opportunity for him to amass that fund of technical knowledge which gave him such an advantage over many of his contemporaries who were not similarly favored by fortune. Dr. Squibb's reputation for painstaking and conscientious scientific work and his high standard of ethics were universally conceded and the influence of this period upon Professor Remington's future work must have been very great. He lived as a member of Dr. Squibb's family and was thus brought into close touch with a master in the profession.

After three years of experience under Dr. Squibb he was recalled to Philadelphia by the death of his mother and, remaining in his home town, entered the employ of Powers & Weightman, with whom he remained for two years, during which period he added still further to his practical knowledge of manufacturing operations. While with this firm, in 1871, he first became associated with the Philadelphia College of Pharmacy in an active way, by accepting an invitation to become the assistant to Dr. Edward Parrish, who was at that time Professor of Pharmacy. In 1872 he left the employ of Powers & Weightman to establish himself in the retail drug business at the northeast corner of 13th and Walnut Streets. In this same year, Professor Parrish died and was succeeded by Professor William Procter, Jr., who retained Professor Remington as the assistant in that department.

In 1874 Professor Procter's death occurred and in the spring of that year, Joseph P. Remington was elected to the full professorship in pharmacy, a position held by him for a period of forty-four years, or until his death.

The period from 1874 until 1885 was one of steady development for the young professor. The thirteen years that he remained in active retail drug practice (1872 to 1885) proved him to be possessed of keen business ability as well as professional attainments of a high order. In 1868 he had become a member of the American Pharmaceutical Association and was honored by that body in 1876 by being made chairman of the committee in connection with the famous Centennial Exhibition of 1876, commemorating the hundredth anniversary of American Independence. This was an important post for a young man of twenty-nine years, but he filled it well and paved the way for the future honors which were to come to him at the hands of this Association.

At this period of Professor Remington's life he was a man of quite different personal appearance from that which distinguished him in later years, for he wore a full beard of a reddish-brown color, and one of the most interesting paintings in the valuable collection on the walls of the college museum is one of the Professor Remington at about that time.

In 1874 he married Miss Elizabeth Collins, also of Quaker ancestry, and in the early 80's established a summer home on the then almost unpopulated beach below Atlantic City known as Longport, at which place he did most of his most valuable literary and revision committee work, and took an active part in the growth and development of the Borough.

In 1877 he aided and encouraged the establishment of laboratory instruction in the college and was elected director of the pharmaceutical laboratory in that year.

In 1878 he became one of the organizers and charter members of the Pennsylvania Pharmaceutical Association and in 1879 he became one of the associate editors of the United States Dispensatory, a position held continuously until his death.

In this same year he developed the methods of laboratory teaching in pharmacy which have been so successfully followed in later years by all teachers of pharmacy. The first operative pharmacy laboratory of about 60 desks in the Philadelphia College of Pharmacy was equipped by him at his own expense.

In 1885 he gave up his retail business at 13th and Walnut and purchased the home at 1832 Pine Street, where he lived until his death, except during the summer months, which were spent at Longport. It was in 1885 that his great work, the "Practice of Pharmacy," was first issued. This is probably the most widely known textbook of pharmacy in the world and is now in its sixth edition.

His first connection with pharmacopœial revision work was in 1877, when he was appointed upon an auxiliary committee of revision by the Philadelphia College of Pharmacy. In 1880 he was a member of the United States Pharmacopœial Convention, was chosen as a member of the revision committee and served as first vice-chairman. This honor was again conferred upon him by the Decennial Convention of 1900.

In 1886–7 Professor Remington received his first honors from abroad in his election to Fellowships in the Chemical, Linnæan and

Royal Microscopical Societies of Great Britain. These honors were later succeeded by honorary membership in the Pharmaceutical Society of Great Britain, the British Pharmaceutical Conference, Pharmaceutical Gesellschaft zu St. Petersburg, Instituto Medico Nacional Mexico, Societé de Pharmacie d'Anvers, Societé Royale de Pharmacie de Bruxelles.

He has also been the recipient of many honorary degrees, including Ph.M. of the Philadelphia College of Pharmacy, Phar.D. of the Northwestern University of Chicago. Of American scientific societies he is an honorary member of the College of Pharmacy of the City of New York and of the State Pharmaceutical Associations of New York, New Jersey, New Hampshire, Nebraska, Ohio, Colorado, Virginia, Georgia, Minnesota and others. He was proud of his honorary membership in the New York Deutscher Apotheker Verein and the Chicago Veteran Retail Druggists' Association.

He was an active member of the American Pharmaceutical Association, American Philosophical Society, the American Chemical Society, the American Geographical Society, the Academy of Natural Sciences of Philadelphia, the Historical Society of Pennsylvania, the Philadelphia College of Pharmacy, the Pennsylvania Pharmaceutical Association, the Chemists' Club of New York, and others.

His literary ability brought him recognition in membership in the Franklin Inn Club of Philadelphia and the Authors' Club of London.

He was the official representative of the United States at the Eighth International Pharmaceutical Congress at Brussels in 1896 and in 1913 at the Hague, was a delegate to the Pan-American Medical Congress in 1893 and again in 1896.

In 1893 he was elected dean of the Philadelphia College of Pharmacy, succeeding Prof. John M. Maisch, who died during the summer of that year. This position he held until his death.

In 1893 he had the honor of occupying the presidential chair in the American Pharmaceutical Association, at what was probably the most important meeting in its history up to that time, it being held in Chicago during the World's Fair of that year, and there was held at the same time and place an International Pharmaceutical Conference, over which he also presided.

His influence in shaping the policies and promoting the success

of the A. Ph. A. had been shown when in 1887 he elaborated a plan for reorganizing this Association and establishing several of the Sections which have been so valuable in the work of the Association, all of its work having previously been done by the entire body. In 1880 he had aided in the establishment of the council as the governing body of the A. Ph. A., and served as chairman of that important executive body for seven years altogether, some of which were in its earlier period and some later.

In 1896 he was elected president of the Pennsylvania Pharmaceutical Association. In 1897 he became pharmaceutical editor of Lippincott's Medical Dictionary, a standard reference work which has passed through many subsequent editions.

In 1887 he attended the American Medical Association meeting as a delegate from the A. Ph. A. and induced that body to establish a section on materia medica and pharmacy, which later became the Section on Pharmacology and Therapeutics. He was often a delegate from pharmaceutical to medical organizations in later years and has done more than any other single man to promote cordial relations between the professions of medicine and pharmacy.

In 1901 occurred the death of Dr. Charles Rice, then chairman of the U. S. P. revision committee. Professor Remington was first vice-chairman, but instead of automatically succeeding to the chairmanship, he called for a special election to fill the vacancy and was himself elected by a vote of 22 to 4.

The difficulties encountered in accomplishing the Eighth Decennial Revision were very great, and a number of the most prominent officers and members of the committee died during the period in which the revision was being done. The work was handled so well, however, and the demonstration of his great executive and harmonizing abilities was so convincing, that when the Convention met in 1910 to select the committee for the Ninth Decennial Revision, he was the member receiving the largest number of votes cast for any individual as a member of that body and when the newly elected revision committee was organized for work he was immediately and unanimously chosen its chairman. Of the work on this later revision, issued a little more than a year ago, nothing need be said. It stands as a monument to his ability, the last and greatest work of his hand and brain.

In 1912 he presided over the Pharmaceutical Section of the

Eighth International Congress of Applied Chemistry at New York City.

The foregoing chronological survey of more than fifty years of Professor Joseph P. Remington's professional activities reveals a wealth of accomplishment that would suffice for a number of ordinary individuals. His was no ordinary nature, however. One of his secrets of success, which was really no secret at all, but an exhibition of that wonderful common sense which after all is so uncommon in application, was his system of combining work and play in such proportions as enabled him to do twice as much work as if he had devoted his entire time to work alone. His power of concentration, his passion for careful attention to details, his insistenc upon the same standards in those who worked for him, are all evidences of a master mind.

Early in his life, Professor Remington and his wife were both members of the Society of Friends, but about 1880 he joined the Episcopalian Church and was for many years intimately associated with Holy Trinity Church as a Sunday-School worker, a member of the Brotherhood of St. Andrew and as a vestryman.

His deep interest in church work was shown by the fact that he deeded the land and contributed generously to the finances of the Church of the Redeemer at Longport, which was under his immediate supervision while he lived and which was directed in his will to be turned over to the Diocese of New Jersey at his death.

His simplicity in his habits of life, his innate cleanness of thought and speech, his "camaraderie" and "gemüthlichkeit" were qualities that made him loved and respected. His loyalty to his alma mater and his constant thought and service in her interests can be attested by thousands of "his boys" as his students loved to hear him call them.

His deep abiding faith in the nobility and dignity of pharmacy as a profession was his strongest trait. No task was too difficult to perform, no expense was questioned when he saw a chance to be of service to a profession of which he was so proud. He probably has attended more meetings and taken an important part therein, than any other professional man of our time.

His diplomatic power and his harmonizing influence were wonderful. Time and time again has he stepped into the breach when discord seemed to reign supreme and by his compelling

personal magnetism brought about a condition of harmony. He has been justly called a great stabilizer.

Equipped by nature with a winning personality, a gift of eloquence and of diction of unusually appealing quality, he has charmed thousands as a speaker upon various subjects, professional and otherwise. His gift of imparting knowledge and enthusiasm to others was marvelous. He has justly been called a teacher of teachers, for the land is filled with those who have sat at his feet and then have gone forth to carry the torch of knowledge to other generations.

His keenness and cleanness of wit, his qualities as an extemporaneous speaker have made him a toastmaster without a peer and he was much sought after upon occasions requiring such service. He was honest and conscientious to a degree that sometimes was inimical to his own interests. During his three decades of service in revision committee work he was ever careful to see that the U. S. Pharmacopœia was entirely finished and out of his hands before doing a particle of work on the revision of either the "Practice of Pharmacy" or the U. S. Dispensatory, lest it should be said that he took advantage of his advance knowledge to reap financial gain.

His family has lost a husband and a father, his college has lost a dean and a professor, his profession has lost its most shining light, and the world has lost a man—a man of whom it can be truly said that he conformed to Huxley's definition of one who had a liberal education, to wit:

"That man, I think, has had a liberal education who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold, logic engine, with all its parts of equal strength, and in smooth working order; ready like a steam engine to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with a knowledge of the great and fundamental truths of nature and of the laws of her operations; one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; who has learned to love all beauty, whether of nature or art, to hate all vileness, and to respect others as himself."

Such a man was Joseph P. Remington. Generations of pharmacists shall not look upon his like again.

A LETTER TO THE EDITOR—RELATING TO PROF. JOSEPH P. REMINGTON.[1]

I have been informed that Professor Remington is very low, and that possibly we may never have the opportunity of another visit together. One may be excused, in a case like this, for addressing a mutual friend, even though the subject be painful to both, and thus I take the privilege of writing you, who, now residing in the city home of Professor Remington, as editor of the *Journal of the American Pharmaceutical Association,* will be in affiliating sympathy with persons like myself, afar off.

These many years ago Professor Remington and I met first in Indianapolis, Ind., at the meeting of the American Pharmaceutical Association, 1879. Professor Remington was then in the vigor of his early manhood. I studied him as a hero, because even at that date his magnificent services to pharmacy had led everyone to consider him as perhaps the most conspicuous incoming American engaged in pure pharmacy in all its outreaches. A professor in the Philadelphia College of Pharmacy; a successful conductor of a drug store in the city of Philadelphia; schooled as he had been with such men as Procter, Parrish and Maisch, with the practical experience that came from personal effort under that Nestor of American pharmacy, Dr. Edw. R. Squibb, in whose laboratory Professor Remington, close to Squibb, served an apprenticeship,—this, too, years after he began his apprenticeship opportunity with the established house of Charles Ellis Sons & Co., of Philadelphia. One can but comprehend that to the present writer the chance, to one whose opportunities had not been great, of meeting this celebrated pharmacist, was an epoch, an event.

May this writer not add that possibly but for Professor Remington he might not himself have been long in the service of pharmacy? Remington it was who championed his cause in a personal way at Indianapolis, even volunteering and reading the paper prepared by the writer for that occasion, "On the Conditions Necessary to Successfully Conduct Percolation."[2]

[1] From the *Journal of the American Pharmaceutical Association,* January, 1918.

[2] See *Proceedings of the American Pharmaceutical Association,* 1879, p. 682.

Close together have we been since that date, each serving in the field of pharmaceutical opportunity, these fields often seemingly separated, and yet united as a whole. In my praise of Remington, I voice what seems sure to me to be the sentiment of thousands of pharmacists who, in separated sections of the country, have been in close touch with this leader of us all, Professor Joseph P. Remington, in Philadelphia.

My dear Mr. Eberle: May I not, in the frankest way possible, express to you these thoughts, and may I not accept that in expressing them, as a lingering member of the associates of Professor Remington who have passed away, as well as thousands of pharmacists in America who may not feel at liberty, as do I, to take that privilege, that I may add to the foregoing even yet a further word?

Among the past close friends of Professor Remington, none of whom are now with us, I recall Professor Saunders, of Canada, a bosom friend of Remington; they attended the National meetings and roomed together. Together they visited England, ovations marking their course in that country. So very close were they that the terms Joseph and William only were used in conversation. That very talented man, Professor John M. Maisch, a teacher-companion of Remington, attended always in Remington's company the meetings of the American Pharmaceutical Association; together they came, never a word of discord between them; companions were they, until came the announcement at our Chicago American Pharmaceutical Association meeting (1893) that Professor Maisch had passed away. Dr. Charles Rice, that remarkable man whose biography has never yet been written, and in my opinion never can be, was to Professor Remington, as to all others, an inspiration. Of Edw. Parrish, to whom Remington was an assistant, Professor Remington always thought and spoke with the utmost veneration, which was also true of Professor Wm. Procter, Jr. And be it said that the wealth of pharmaceutical opportunity that came to Professor Remington from these teachers and companions was distributed by him to the world-at-large. To thus name all the companions of the olden time, made by Professor Remington, would be to mention every teacher who had accomplished or contributed to the cause during the period of Remington's early activity.

But not alone with such as these did Prof. Remington fraternize. Not a student, within forty years, has been graduated from the

College of Pharmacy in Philadelphia, but feels that he is a close friend of sympathetic Professor Remington. It has been my privilege to meet many hundreds of these graduates of that long-established institution, and never, so far as I can recall, did a discussion connected with pharmacy occur but that the name of Professor Remington came in as that of one of whom the speaker knew personally. This, I will say, is literally true, because every member of the class of the Philadelphia College of Pharmacy for decades has been to Professor Remington a personal charge, and Remington being in the department of pharmacy is naturally very close to any student whose life work is to be pharmacy.

But what of other companions? To my mind's eye they arise, everywhere.

Wherever there was to be an event in pharmacy that would bring together men imbued with the cause of pharmacy, Remington was sure to be present, and not alone was he present, but actively so. A leader among them all was he. If an address was to be made, Remington was the one selected for the purpose, in whatever direction it may have been necessary. And, Remington never failed. At alumni meetings and college reunions held by pharmaceutical organizations Remington was considered one of the members, as much so as though his college course had been in their college. Be it known, to Professor Remington the cause of pharmacy was cosmopolitan, and he considered himself to be concerned in every phase of pharmaceutical effort. Whoever was teaching, whoever was studying, whoever was contributing in any direction, and from any direction, was in his circle.

Perhaps the most enjoyable of all occasions at the various meetings of pharmaceutical associations that it came my privilege to attend were those of the alumni of the Philadelphia College of Pharmacy, and in these always Professor Remington was not only an integral part, but a cherished guest; a representative of the world-at-large, as well as of the college to which he devoted his special time.

And not alone with those concerned in manipulative pharmacy such as becomes the charge of the apothecary, but of men engaged in pharmaceutical activities on a very large scale, such as came into the field with the entrance of the factory manufacturer, "the manu-

facturing pharmacist," did Professor Remington affiliate, by right of education. His personal experience with Dr. Squibb, the connection his preceptors, Procter and Parrish, held with such as Tilden and Company, Charles Ellis Sons and Company, Wm. R. Warner and Company, Hance Brothers and White, Charles Bullock, Sharpe and Dohme, Frederick Stearns, of Detroit, and others of the struggling pioneers of those days, led Professor Remington to a kindly affiliation with those establishing and conducting such industries as these. He appreciated that they had become a part in American pharmaceutical evolution, and that in their activities the factor of pharmaceutical education of the individual should dominate. And hence we note his kindly affiliation and helpful services to those who came in later, principal among whom may be mentioned Parke, Davis & Co., of Detroit, and Eli Lilly & Co., of Indianapolis. Well do I remember how, when Mr. Eli Lilly, founder of the house, gave a home banquet on a special occasion two decades or more ago, Professor Remington made the journey from Philadelphia to Indianapolis. And surely Remington would have made that journey if for no other reason than to please his pupil, J. K. Lilly, whose pharmacy instruction was taken under Professor Remington in the Philadelphia College of Pharmacy. Well do I remember that happy occasion, which it was also my privilege to enjoy.

As would be supposed from the congenial nature of Professor Remington, which so impressed everyone he met, his family relationship is most delightful. To touch this phase of his life is a very delicate subject, even in a letter to a mutual friend, but yet I cannot refrain from expressing to you the pleasures that have come to me in the visits to and from Professor Remington's family, and members thereof. To enter that home is like entering one's own, because of the whole-souled hospitality of each and every member. To this it may be added that Professor Remington's love and affection for his wife and children, as shown to his personal friends, is only paralleled by a reciprocity from themselves. Taken all in all, a very happy and a very charming family is the Remington family I have in mind.

My dear Mr. Eberle: I feel that this letter is much too long, and yet its space would be much too short were one to attempt to

present even the high lights of a biography of Professor Joseph P. Remington. I have recorded but a touch of what came to me in the passing along of a discursive letter, as thought crushed upon thought, event upon event, opportunity close following opportunity in the direction of what I felt needs be said, and yet for lack of space, could not be said. Painful though it is to think that I am writing this letter during what may possibly be the closing period of the life of this companion and friend, it is yet a melancholy pleasure to feel that I am not passing the bounds of prudence. All I have said and more will be felt by others who were more fortunate, others who were in daily touch with Professor Remington, as it was not my privilege to be, and who may not, as do I, assume the responsibility of intruding a personal letter.

Strange how insidiously Time moves us in and out. Of those close in the companionship of Professor Remington and myself in days long gone by, very, very few are living.

May I not close this letter with a sentence from "The Code of Manu"—

"As drifting logs of wood may haply meet
On ocean's waters surging to and fro,
And having met, drift once again apart,
So, fleeting, is the intercourse of men.

"E'en as a traveller meeting with the shade
Of some o'erhung tree, awhile reposes,
Then leaves its shelter to pursue his way,
So men meet friends, then part with them forever."

Sincerely yours,
JOHN URI LLOYD.

CINCINNATI, O., December 29, 1917.

THE FUNERAL OF PROFESSOR JOSEPH PRICE REMINGTON.

Professor Joseph P. Remington's body was laid in its last resting place on Friday, January 4, 1918. There was a private service conducted at his late residence, 1832 Pine Street, by his youngest son, Rev. Wm. P. Remington, who officiated in the uniform of an army chaplain.

The public services were held in Holy Trinity Episcopal Church at 19th and Walnut Streets, and the services here were conducted by the Rector, Rev. Floyd W. Tomkins.

The honorary pall-bearers were Dr. Harvey W. Wiley and Samuel L. Hilton, of Washington, D. C.; Dr. William Jay Schieffelin, of New York; Samuel C. Henry, of Chicago; Joseph L. Lemberger, of Lebanon; and the following Philadelphians: Prof. Charles H. LaWall, Prof. Frank X. Moerk, Prof. E. Fullerton Cook, Howard B. French, Dr. Richard V. Mattison, Dr. Adolph W. Miller, Dr. Charles A. Weidemann, Warren H. Poley, C. Stanley French, George B. Evans, George M. Beringer, Joseph W. England, Walter A. Rumsey, Richard M. Shoemaker, Jacob M. Baer, Aubrey H. Weightman, Otto W. Osterlund, Prof. Samuel P. Sadtler, William L. Cliffe, Henry K. Mulford, Edwin M. Boring, Theodore Campbell, Charles Leedom, Jacob S. Beetem, of the College; Morris Earle, J. W. Townsend, Samuel Hinds Thomas, William West Frazier, Henry H. Collins, George R. Yarrow, Carroll S. Tyson, Charles F. Gummey, Dr. John B. Roberts, Carl N. Martin and C. C. Morris, of Holy Trinity Church.

The coffin was carried down the center aisle of the church upon the shoulders of four young men and deposited in front of the chancel, the railing of which was banked with many handsome floral tributes from friends and organizations all over the United States.

The vested choir sang some of Professor Remington's favorite hymns during the service, which was the brief, beautiful and impressive one of the Episcopal Church. That part of the service usually conducted at the grave was completed in the church. The interment was private and was attended by only the members of the family and four of the closest friends from among the honorary

pall-bearers. The burial took place in the Friends' Burying Ground just across Cobb's Creek, a short distance south of Market Street. No services were held at the grave but just as the body was being lowered into its last resting place, his son, Rev. Wm. P. Remington, stepped to the head of the grave and offered a beautiful prayer.

The only flowers accompanying the body to the grave were those presented by the Faculty of the College. All of the others were sent to various hospitals in the city, to bring joy to the sick and suffering. This was in recognition of a practice which he was known to favor.

THE MEMORIAL MEETING TO PROFESSOR REMINGTON.[1]

A very impressive memorial meeting to Professor Joseph Price Remington, dean of the Philadelphia College of Pharmacy, who died January 1, 1918, was held January 4, immediately after the funeral services, in the library of the college he loved so well and in whose service he spent so many years of his life. The room was filled with the Philadelphia friends, associates and former students of the dean, and a surprisingly large number of men from other cities, considering the weather and the condition of the train service. Men prominent in all pharmaceutical activities paid tribute to the memory of this international figure in pharmacy, either personally or by telegram and letter. These tributes were sincere and came from the heart, as the emotion of the speakers testified.

The meeting was called to order promptly at 3 o'clock by President Howard B. French, who said:

This meeting has been called as a memorial meeting to the late Professor Joseph Price Remington. The college held a special meeting on Tuesday, January 2, and adjourned until to-day, so that due and proper honor could be paid to the memory of one of the greatest pharmacists that ever lived." He then asked the secretary of the college, Dr. C. A. Weidemann, to read a letter received from Mr. George M. Beringer, chairman of the board of trustees, who was prevented from being present by a broken ankle, the result of an accident. Mr. Beringer's letter was as follows:

In the midst of the overshadowing sorrow at the passing away

[1] Prepared by Mrs. Charles H. LaWall.

of this illustrious friend and foremost American pharmacist, my thoughts revert to that time, nearly forty years ago, when I entered the Philadelphia College of Pharmacy as a student and came under the tuition of that trio of master teachers, Professors Maisch, Remington and Sadtler. Each of these, by a personality as noteworthy as their ability, won the esteem and affection of their students.

The moral influence that Professor Remington during the last fifty years has exercised in molding the characters and lives of his numerous students, while imparting to them technical and professional instruction, has been no small part of his life's work. The value of this preceptorship can be attested by many pharmacists and by their example this influence will continue to extend to the oncoming generations of pharmacists.

In later years as a member of the college and as a trustee thereof and especially as the chairman of the committee on instruction, it was my privilege to become more closely allied with him and better acquainted with his work as a teacher and his services as the dean. Likewise, in the American Pharmaceutical Association and as a member of the Committee of Revision of the Pharmacopœia of the United States, our interviews were frequent and our correspondence voluminous. In these I often obtained a closer view of the character and determination of Professor Remington and learned of his remarkable knowledge of men and their mental peculiarities. Above all, I learned of his ability as a leader, which enabled him to enthuse others and obtain their best efforts.

It was this latter qualification that made him so successful as chairman of the committee of revision of the Pharmacopœia. In the Eighth and Ninth Decennial Revisions of the U. S. P., we have an established record of his efficiency as chairman, and the progress made and the advanced scientific standing of these revisions can be very largely attributed to the ability and indefatigable efforts of the chairman.

Following the illustrious examples of Procter and Parrish, Professor Remington nobly carried on the work that they had commenced and has established the teaching of pharmacy on a solid foundation. His monumental literary works, "The Practice of Pharmacy" and the pharmacy of the United States Dispensatory, mark his preëminent position as an author in this, his chosen field. Professor Remington has left a record replete with accomplishments for pharmacy.

To know him was but to admire; to work with him was an inspiration, and to carry on his plans for the advancement of pharmacy becomes now a sacred duty. GEORGE M. BERINGER.

CAMDEN, N. J., January 4, 1918.

Resolutions from the Pennsylvania Pharmaceutical Association were read as follows:

The PENNSYLVANIA PHARMACEUTICAL ASSOCIATION, through the undersigned committee, begs leave to present the following resolutions to the Memorial Meeting in honor of

Professor Joseph Price Remington

at the Philadelphia College of Pharmacy, January 4, 1918.

WHEREAS our Heavenly Father has called from our midst Joseph Price Remington, one of the founders and a former President of the Pennsylvania Pharmaceutical Association, and

WHEREAS, Professor Remington, through his loyalty and devotion to the interests of pharmacy generally and the Pennsylvania Pharmaceutical Association in particular, endeared himself to all of our members, and

WHEREAS it is felt that pharmacy, through his passing away, has lost one of its greatest men who, as a teacher, author, association worker and adviser, left the impress of his character with thousands of students, pharmacists, chemists, physicians and other men of affairs; therefore, be it

Resolved that the Pennsylvania Pharmaceutical Association expresses its keenest regret and sorrow at his passing and extends the sincerest sympathy to the members of his family in their hour of sorrow; and be it further

Resolved, that a copy of these resolutions be spread upon the minutes of the Association, and a copy be sent to the members of his family.

W. H. KNOEPFEL, Scranton, President,
J. A. KOCH, Pittsburgh,
W. L. CLIFFE, Philadelphia,
J. L. LEMBERGER, Lebanon,
C. C. CAMPBELL, Pittsburgh,

Respectfully submitted,
(Signed) ROBERT P. FISCHELIS,
Secretary.

Then followed the reading of the resolutions prepared by a committee appointed by the Philadelphia College of Pharmacy, presented by Joseph W. England, chairman of the committee.

IN MEMORIAM JOSEPH PRICE REMINGTON, 1847–1918.

WHEREAS, In the demise of Joseph Price Remington, American pharmacy has lost its foremost figure and the Philadelphia College of Pharmacy its most distinguished son, therefore be it

Resolved, that we, the members of the Philadelphia College of Pharmacy, in special meeting assembled, express our deep sorrow at his passing and pay tribute to his work and worth.

As a pharmacist, he labored in all the branches of pharmaceutical practice, retail, wholesale and manufacturing, acquiring an unusually wide experience. He was graduated from the Philadelphia College of Pharmacy in 1866, the subject of his thesis being "Our Alma Mater, Its Rise and Progress," little dreaming, perhaps, that he was destined to become a most important factor in its development during the next fifty years.

As an educator, he was trained by Edward Parrish and William Procter, Jr., two of the greatest pharmacists that American pharmacy produced in the last century. In 1874 he was elected to the chair of theory and practice of pharmacy of his alma mater, later becoming also professor of operative pharmacy and director of the pharmaceutical laboratory (1877) and then dean of the college (1893). He has taught thousands of students. He was an impressive teacher, presenting his subjects in a logical and practical manner; his language was clear and forcible and his voice distinct and penetrating. He had a magnetic personality and his lectures made a deep and lasting impression. He was the students' friend, beloved by all. He may have been said to have been a teacher of teachers, for most of the successful teachers of pharmacy in America to-day have been pupils of his at some time in their careers.

Not only this, but he exercised a potential influence upon pharmaceutical education, generally, being most active in developing many improvements and important changes in methods of teaching. His method of instruction in operative pharmacy led to the creation of a pharmaceutical laboratory in the Philadelphia College of Pharmacy, the first of its kind in this country, the essential features of which have been adopted by nearly all of the colleges

of pharmacy in the United States, and he was the first to visualize the importance and necessity of teaching commercial pharmacy in schools of pharmacy and to establish such a course.

As an author of pharmaceutical textbooks, he had a national and international reputation. He was the author of the 'Practice of Pharmacy,' first issued in 1885, used in every college of pharmacy in this country, and widely known abroad, the associate editor of the United States Dispensatory since 1879, the fifteenth edition of which was published in 1883. This edition and the later ones have proved to be the most successful ever issued. Prior to 1883, the work was edited entirely by physicians; since then American pharmacy has been honored by having placed upon the title page of this book the name of a pharmacist as one of its editors and has been properly recognized in its relation to medicine.

As a member of the American Pharmaceutical Association he was most active. Joining in 1867, he served the Association in many capacities, being a regular attendant at the annual meetings, taking a leading part in the discussions and presenting papers on many important subjects, as the volumes of the *Proceedings* and *Journal* since 1868 bear ample testimony. His good judgment and safe advice were constantly in demand. He was chairman of many important committees. He proposed the plan which was adopted for the establishment of the council in 1880 and was its chairman for seven years. In 1887, he elaborated a plan for the reorganization of the Association, dividing the scientific work into sections, and secured its adoption. He was president in 1892–93 and permanent secretary in 1893–94.

In 1887, the American Pharmaceutical Association appointed him as a delegate to visit the American Medical Association, and he induced that Association to establish a section of materia medica and pharmacy, which has since become the Section of Pharmacology and Therapeutics. He was chairman of delegations subsequently sent to this Association, and on such occasions rendered valuable service in bringing the professions of medicine and pharmacy into closer relationship.

Not only in national pharmaceutical affairs was he active, but he took a deep interest in the growth and development of state associations, frequently attending their annual meetings, making addresses and presenting papers. He was one of the charter members

of the Pennsylvania Pharmaceutical Association in 1878 and its president in 1890.

As an executive and leader of men he had international fame. He was president of the Seventh International Pharmaceutical Congress (1893), a delegate to the Pan-American Medical Congress (1893) and to the Second Congress in Mexico (1896); represented the United States in the Eighth International Pharmaceutical Congress at Brussels (1896) and was president of the Pharmaceutical Section of the Eighth International Congress of Applied Chemistry (1912). He received the honorary degree of Master in Pharmacy from the Philadelphia College of Pharmacy and from the Northwestern University of Illinois the honorary degree of Doctor of Pharmacy, Phar.D. He was a Fellow of the Chemical, the Linnæan and the Royal Microscopical Societies of Great Britain; honorary member of the Pharmaceutical Gesellschaft zu St. Petersburg, Institute Medica Nacional of Mexico, Societé Royal de Pharmacie de Bruxelles, Societé de Pharmacie d'Anvers; an active member of the Philosophical Society, American Chemical Society, American Geographical Society, Academy of Natural Sciences of Philadelphia, Historical Society of Pennsylvania; honorary member of the Pharmaceutical Society of Great Britain, British Pharmaceutical Conference; member of the Federatione Internationale Pharmaceutique of The Hague, Franklin Inn Club of Philadelphia, Chemists' Club of New York and Authors' Club of London.

But his greatest work probably was as chairman of the committee of revision of the Pharmacopœia of the United States of America, a work which has become of vast importance by reason of its legal standing under the Federal and State Food and Drug Acts. His connection with the U. S. Pharmacopœia began in 1877, when he served on an auxiliary committee of revision. In 1880, 1890, and 1900 he was sent as a delegate of the Philadelphia College of Pharmacy to the national conventions and in these served as first vice-chairman of the final committee of revision. Upon the death of the chairman of the committee in 1901, Professor Remington was made chairman, and was again elected in 1910, holding the position until his death. The Ninth Revision, issued in 1916, may be truly called his monument, since the whole work is stamped with his personality.

As a man, 'we ne'er shall look upon his like again.' 'Genial,

eloquent, clean-hearted and clear-minded,' possessed of unusual natural ability coupled with rare executive capacity, he served his day and generation, loyally and enthusiastically, and left a record of achievement that may well serve as an example to future generations.

Just a personal note: Professor Remington was gifted with a charming personality. His courtesy, his tact, his ability to adapt himself to all types of people, made friends of all those he met, while his strong, clean intellect served to inspire them. The meaning of his departure from life may be expressed in the following lines from S. Weir Mitchell's beautiful poem, 'Evening':

"I know the night is now at hand,
The mists lie low on hill and bay,
The autumn sheaves are dewless, dry,
But I have had the day.
Yes, I have had, dear Lord, the day:
When at Thy call I have the night,
Brief be the twilight as I pass
From light to dark, from dark to light."

Resolved, that this appreciation be entered upon the minutes of the Philadelphia College of Pharmacy, and a copy sent to the family of the deceased.

J. W. ENGLAND, *Chairman,*
SAMUEL P. SADTLER,
CHARLES H. LAWALL,
JULIUS STURMER,
HARRY K. MULFORD,
Committee.

PHILADELPHIA, January 4, 1918.

After the reading of the above resolutions of the College, the president announced that a motion to adopt was in order. Professor Eberle moved an amendment, as follows:

I would like to move a recognition of the appropriate words in which these resolutions have been presented and that we acknowledge the sentiments as our own views by a rising vote.

The motion was unanimously carried by a rising vote.

The following are the resolutions adopted and presented by the Faculty of the College:

PHILADELPHIA, January 4, 1918.

At a meeting of the faculty of the Philadelphia College of Pharmacy held this day, the following resolutions were unanimously adopted:

WHEREAS, Providence has seen fit to end the earthly career of one of our number and has taken from our midst our beloved associate, Professor Joseph P. Remington, our senior member, and one endeared to us all by years of association, we would

Resolve that we hereby express our sense of the loss which is brought home to us personally as his associates, assistants, and colleagues of many years, during which his friendship, counsel and kindly help were constantly at our command.

We would also express our sense of the great loss which the College has suffered in the death of one who was not only its most distinguished alumnus, but who stood for years as a tower of strength, as its most eminent representative among the educational forces of the pharmaceutical profession.

Not only did he, as a pharmaceutical author and writer, do credit to our institution throughout the world by the international reputation he developed, but he worked incessantly as official and unofficial delegate and visitor to further the interests of pharmaceutical education and advancement, as illustrated in the work of our College.

We would also call to mind the sense of loss which will be felt by hundreds of his former students to whom he was not merely a memory but had continued a personal friend and frequent helper and advisor.

Resolved that we tender to his family our deep sympathy in their hour of bereavement and express the hope that they be comforted by the belief that he has gone to his eternal reward.

(Signed) SAMUEL P. SADTLER,
CLEMENT B. LOWE,
FRANK X. MOERK,
Committee.

President French then called on various friends and associates to give expression to their appreciation of and esteem for Professor Remington, the first being Professor Emeritus Samuel P. Sadtler, who has been connected with the college for many years and associated with Professor Remington in many activities. He spoke as follows:

Mr. Chairman and Gentlemen, Friends of the College, Friends of the late Professor Remington: It is, of course, a very personal and therefore a very hard matter for me to talk this afternoon. I became acquainted with Joseph Price Remington first in 1878, when I was called here to assist the late Dr. Bridges in the lectures on chemistry. We became very intimately acquainted, shortly thereafter, as we both worked from 1880 on at the U. S. Dispensatory, and from that time our association was very close and we came to know each other very well. Independently of that work, our constant association in the teaching work of the College and later on the U. S. P. Revision Committee brought us into closer contact. All this threw me constantly into association with him. Therefore I feel a great personal loss. The feeling of that loss will be a recurrent one, not to-day alone, but repeatedly.

I want to speak more particularly of the loss which this college and pharmacy generally will sustain in the death of Professor Remington. He was not only the most widely known and honored professor of this college and the dean of the college, but we may properly say that he took the whole burden of looking after the name and interests of the college throughout the world. Wherever pharmacists were gathered he was looked upon as the typical representative of the Philadelphia College of Pharmacy. His loss will be felt, not only to-day, but through succeeding years. American pharmacy has suffered a great loss. Many of the gentlemen here will testify, from personal knowledge, that he was in touch with every phase of these varied activities probably more than any other man in the United States, not only in the teaching of pharmacy but in presenting pharmacy and its achievements to the public, and later in making up that great summary of pharmaceutical teaching for the medical and pharmaceutical professions, the United States Pharmacopœia, which has moreover, since the passage of the Food and Drug Act, become the legal standard for the purity of drugs and medicinal preparations. The work that he did on the U. S. Dispensatory and his own 'Practice of Pharmacy,' beginning in 1883, must also be remembered.

In all of these lines he was active and foremost, taking the work of several men on his own shoulders. He had reached the age of three score and ten and any years that remained after that must be considered as a gift of Providence. While he could not

have continued to work with the same energy it would have been well if he could have been spared as a counsellor. Of course, when people reach that age we do not expect much more of activity, but the man who retains his faculties can be a valuable aid and adviser to younger men.

I have said that I have a sense of personal loss and I have tried to point out the loss which the profession of pharmacy and the teaching of pharmacy will experience in his death. We shall only begin to realize this as succeeding years roll by.

President French then said: You will pardon the chair for giving a personal experience. My first acquaintance with Professor Remington started in 1855 or 56. Possibly I have known him longer than anyone in this room, as we started our friendship playing together as boys.

His loyalty to the college has always been an inspiration to me and for many years we have worked together for the benefit of this old institution. He and I looked forward with great interest to the centenary of the Philadelphia College of Pharmacy, which will take place in March, 1921.

I presume that I have been connected with this institution possibly as long, or perhaps longer than any man living to-day—50 years last October; and during this association and connection I came into close contact with Professor Remington, and I have learned to respect and honor him. He was a strong character, firmly believing that he was doing the best, by his devotion to the college, for pharmaceutical learning throughout the world. His loss to us is a serious one and I realize what a burden has fallen upon the shoulders of those who are left. We shall have to do our best to follow his example and emulate the loyalty he so frequently expressed for the institution.

He then called upon the following to pay tribute to Professor Remington in the order given:

Professor J. W. Sturmer, Associate Dean of the College:

Professor Remington, the Teacher.

Man is a bundle of many attributes—some of them reciprocally synergistic, some of them seemingly incompatible; and while it may be difficult to sum up a great man's work in a few brief words, it is more difficult still to explain how he achieved his results and to name those personal characteristics of his which made them pos-

sible. But it is not my purpose to marshal in review the many achievements of Professor Remington and to disclose the secret of his success. I desire merely—with a sad heart—to lay my humble twig of laurel upon his grave.

And I will speak, Mr. Chairman, of Professor Remington, the teacher, for whatever else he was and whatever else he accomplished, he was primarily and fundamentally a teacher, a teacher of the first rank. What qualifications are necessary to a great teacher? We are informed that a teacher of pharmacy should have acquired a certain sum of knowledge, should have attained to certain scholastic degrees. But a pool of water, even though it be a large one, does not necessarily constitute water power; and a man who is a great reservoir of knowledge is not necessarily a great teacher. Professor Remington was a great teacher because he possessed, in addition to the requisite learning, that fine altruistic spirit which made him desirous to help others, to give, to give to his students of his knowledge, of his time, of his energy. of his wisdom. Further, he had a keen insight into human nature. He understood men, knew the youthful mind, could sense the attitude of his classes. He appreciated that students are not uniform units which could be dealt with *en masse,* but that each represented a distinct individual, a distinct personality. Hence his great success in establishing those cordial relations, indeed personal friendships, which did not cease with the students' college days. When I—a youth of twenty-one—had been appointed an assistant in a distant university, my preceptor, a graduate of this college, told me about a visit he had just paid to his former teacher, Professor Remington, who received him with a warmth of welcome which came from the heart and which made of this visit an instance to be treasured in the memory. 'Young man' said my preceptor, 'make your students like you, as Professor Remington makes his students like him, and you will succeed as a teacher.' A strange coincidence, that fortune associated me on the same faculty, during the past few years of his life, with the great teacher who had been pointed out as an exemplar.

Nature had endowed Professor Remington splendidly. He had a commanding presence, a clear, pleasing voice, and a smile which was infectious. In his discourses, he ran the gamut of didactic exposition, humorous anecdotes, and thrilling bursts of impassioned oratory.

Is it any wonder that he was a great energizing force, a catalytic agent, who stimulated his students to study and to work, not only during their college days, but for life? And to-day, thousands of his graduates throughout this broad land are performing worth while work in this work-a-day world, dispensing, compounding, manufacturing, inventing, writing, teaching.

What Huxley did for biology and Tyndal for physical science, Professor Remington did for pharmaceutical science; he popularized it, gave it a human interest, gave it life.

His activities have now ceased; he has laid away the crayon and the pointer of the class room and folded his hands for the long, mysterious rest. But the fruits of his labors will grow through the years. As long as illness and pain are the common portion of the sons of men, there will be need for the makers of medicine. Pharmacy therefore, will endure, and so will also the fame of its great teacher—Professor Joseph Price Remington.

Dr. Harvey W. Wiley, President of the U. S. Pharmacopœial Convention spoke as follows:

Mr. President, Ladies and Gentlemen: I am here in two capacities to-day. I am here to represent, first of all, the Pharmacopœial Convention and the board of trustees thereof, and secondly, in my private capacity. I want to speak first of Professor Remington's work in a professional way. I think very few of you realize, except those who have worked with him, the magnitude of the work which he undertook. Fortunately, he came to the Ninth Revision with a very valuable experience which he gained in the Eighth Revision, so that he was the ideal person to head the great revision committee, both in professional ability and experience. I learned a great deal of the magnitude of the work during the past eight years, and I have often wondered how he could physically and mentally endure the great strain that was placed upon him. He did not. I doubt not at all that his death was very much hastened by his labor on the Ninth Decennial Revision. But he would not withhold his hand in fear of death, although I have asked him to do so, because, in my opinion, he considered the one place to die, of all others, is in harness, and if Professor Remington had known that he could have prolonged his life by declining the burden. I am sure he would not have done so. As I look back upon the last eight years, I have more

and more come to realize that Professor Remington was the great stabilizer. You know they are using the gyroscope now to stabilize ships upon the sea. The tendency of the gyroscope is to remain, by reason of inertia, in *statu quo,* and when it revolves it remains in that position and it takes great force to push it aside, one way or the other; so if you have a gyroscope in full action it will hold the ship in position.

The effect that Dr. Remington had upon the great work of revision was that of the gyroscope. He held it true to its course, and no one knows more than I the forbearance he had to exercise to hold it so. There were very many intricate questions to decide, and if there had been a man of less ability than Professor Remington at the helm, he could not have steered the ship clear of all dangers and brought the revision committee through. That alone stamped him as a man of great character and force. No one who took any part in these deliberations would fail to recognize his strong guiding power and resistance to pressure.

One of our great authors, Emerson, I think it was, has described character as the grass, which is flexible and not firm; every wind moves it. As it grows up it will not yield as it did before. So with human character. It is not so much education and heredity, but the result of experience, and when guided by a heart which is always true and a brain which is always clear, every experience of life builds character. No wonder that Professor Remington approached the end of his life with such a character; his great care was always to avoid the wrong and uphold the right. This is the view I have gained of him during the years of association with him.

One of his great monuments is the Ninth Revision of the U. S. Pharmacopœia. It is his book. Louis XIV spoke of the state and said 'C'est moi'—'It is I.' So, in speaking of the U. S. Pharmacopœia, we can say 'C'est lui'—'It is he.' And so, as the official head of the organization which produced this book, I have come to pay tribute to his memory.

"That I can do rather easily, but when I come to the second part of my theme I feel it almost impossible to say what I should like to say, and that is about Professor Remington as a friend. I have known him considerably over a third of a century. His was a friendship which grew upon one, as one knew more and more his worth and loyalty, and I could have shown no better illustration of

my friendship than in the christening of my first boy. My wife kindly permitted me to choose the godfathers and I chose Joseph P. Remington and John Uri Lloyd, and I am glad to know that my boy, now approaching his sixth year, will realize (he does realize now) his loss at the death of his godfather and realize it more and more as he grows older. What a blessing he had in two such godfathers! There is nothing in my personal history that I prize more than that event. And so I have learned to prize Remington more and more as the years go by.

I do not quite agree with Professor Sadtler in saying that when a man is seventy, he perhaps is not of much more use in life. If I had quit at seventy I would not be here to-day; I am seventy-four. I feel that it is hardly a compensation for our loss to think of Professor Remington as having lived his whole life. No good man ever lives his whole life. The old adage says that the good die young. I have seen a clever addition to that saying—'The good die young, no matter how long they live,' and Remington would have died young had he lived to a century, because he had in him the spring of eternal youth. No man grows old whose heart is young. The beautiful words of one of your local poets, Dr. S. Weir Mitchell, have already been quoted here, and may I return to one of my friends of 2000 years ago in endeavoring to express to you the feeling I have to-day? The old Latin poet said 'Nil ego contulerim jucundo sanus amico'—'As long as I am in my right mind I shall never prefer anything to a delightful friend'; and so I say that as long as I am in my right mind I shall never prefer anything to the delight I have had in the association with this friend.

Prof. J. A. Koch, dean of the Pittsburgh College of Pharmacy said:

I have come to pay tribute to the memory of my friend, Professor Remington. I do not know when I first met him, but I do remember when I first learned to know him. It was here in this building, twenty years ago, just after I first took up my duties at the Pittsburgh College of Pharmacy. I came to see Professor Remington and the advice he gave me and the goodness of heart with which he took up my case were overwhelming. I have, from that time on, felt that I had in him a friend. It has been my good fortune to meet him very frequently and I was especially fortunate

in being able, in 1913, to spend seven weeks with him when we were together as delegates to the International Pharmaceutical Congress from the American Pharmaceutical Association, and I then learned to know him as I never would have learned to know him in any other way. I felt very much pleased to think that he liked me and liked to have me with him; that was what he told me. I feel very proud of that. I have simply come to pay tribute to his memory and to mourn with you your loss.

Mr. J. L. Lemberger, Lebanon, vice-president of the Philadelphia College of Pharmacy:

I have had in my heart the last few days a feeling of the greatest sadness of my life, the parting with my dear friend, Professor Remington. We had known each other intimately for perhaps thirty years or more. We were as intimate as two brothers almost. I had his confidence in many things; he had my confidence in many things. There was but one side to Professor Remington—he was all around right. He was moved to do right by a conscientious desire to do so. Can I say anything better of our departed friend? I knew him well enough to know that it was a principle of his life.

In the many things we had in common, American Pharmaceutical Association, Pennsylvania Pharmaceutical Association, this dear old college, our alma mater, when we came to sift down to what we would call the bottom facts of the thing (his name is Joseph and my name is Joseph; we knew each other as 'Joe'), our conclusion always was, 'Joe, we must do right in this matter.' Can we have a pleasanter memory of a good man than to think of him as having been conscientious in all matters of life, moved by a desire to do right?

"I went out to the cemetery and looked into the open grave and said 'Farewell'; not good-bye forever, but 'Farewell.' The memory of his life will come to me every time I enter this college and every time I go to an association meeting, and we shall think of Remington; what a great delight it will be to have such a memory of a friend. He lived a good life, a useful life, and he had a joyous disposition, a magnetic disposition. He filled the room with his presence, whether in the college or in the circle of that dear home of his. His end came peacefully indeed, very peacefully. His end

was such as we might desire to be ours, when the time comes, and a hallowed thought is 'May our lives be as fruitful as his was; when we come to the end may our end be as was his.' We think of him now, not as a loss to us, but as living on, on, on, in that world, where 'Eye hath not seen nor ear heard, neither has it entered into the heart of man to conceive,' the joy that our dear Brother Remington is now enjoying.

Prof. H. V. Arny, professor of organic chemistry in the New York College of Pharmacy:

Mr. Chairman: I am here in more than one capacity, not merely in the rôle of a student mourning the loss of his great teacher, but also as the official representative of the New York College of Pharmacy. Dean Rusby asked me to express particularly to the sister institution the profound feeling of sympathy in the loss of your dean and the great regret that his college duties prevented him from coming himself. I wish, however, to particularly emphasize the feeling of personal loss. In Mr. Beringer's letter, mention was made of the great triumvirate of teachers; I will add a fourth to the list—Maisch, Sadtler, Remington and Trimble. These four men, I think, exercised a greater influence upon pharmacy than any other four men ever did, standing as disciples not only of true pharmacy, but also of sceince, and of these four there was none that we recognize as greater than our departed friend. I will even go so far as to say that all the success I have had in teaching I attribute very largely to Professor Remington. I owe him a debt of eternal gratitude. He had a way of taking a dry fact and of connecting it with an anecdote that impressed it on the mind, as no other teacher I know of could do. It has been my privilege to hear many great teachers, but in my opinion, there was none superior to Professor Remington as far as beauty of diction or interest is concerned.

My heart is too heavy to say more, except that it is not merely as a teacher, but as a personal friend of Professor Remington that I wish to say a word. He was always courteous, even when he differed from a man; he was always the same sweet, gentle, kindly man. I am here chiefly as a mourner; I have lost one of the dearest and best of friends.

Mr. Samuel L. Hilton of Washington, D. C., treasurer of the board of trustees of the U. S. Pharmacopœial Convention:

Mr. President, Ladies and Gentlemen: It was my privilege some thirty years ago to become acquainted with Professor Remington. I now consider it a privilege to have the opportunity to pay tribute to his memory. The acquaintance of such a man was an inspiration to me. It led me to follow his advice, his counsel, and to look upon many subjects from the point of view of what is right and what is wrong, so that I feel I made few mistakes in considering questions pertaining to pharmaceutical subjects when I looked upon them from the viewpoint of Remington.

I have been associated with him in various kinds of work for years. We frequently called on each other and I have learned to love him. In the loss of Professor Remington, American pharmacy has lost its brightest light. It has lost a man who has done more for the advancement of pharmacy than any other man for the past twenty-five years. My heart is full; I do not possess the words that are necessary. There is no one in American pharmacy for whom I had greater respect.

On many occasions I have called at this institution to seek his advice and I have always found him correct and wise in his judgment. I have differed with him and he has always taken it in the proper spirit. This is an occasion when every one connected with pharmacy feels his loss. In U. S. P. work during the last two decades, Professor Remington has been the man upon whom everyone in connection with that work has depended. Dr. Wiley has said that he had the faculty of bringing divergent views together in a way that was best for medicine and pharmacy. Is there any higher tribute that can be paid to the memory of Professor Remington? His name will go down in history with that of Procter and Maisch.

Mr. Caswell A. Mayo, editor of the *American Druggist,* New York:

For many years it has been my great privilege to have known Professor Remington. I knew him first as a teacher. I came here, a callow youth, from the state of Mississippi, with a little knowledge of pharmacy and science, called here by the great reputation my alma mater enjoyed as a teacher of men. I think that Professor Remington had, to an extent which I have never seen equaled, the peculiar capacity which is required of a successful teacher.

Many teachers are wise, many have many attainments, but no ability to inspire in their students that zeal for study, that desire to avail themselves of all the opportunities which the institution offers, which he possessed in so eminent a degree. I think one of the best monuments of his life is in the teachers he taught. Others have spoken of him as being preëminently a teacher of teachers, I think there is hardly an institution of pharmacy in the United States where you will not find teachers made by him.

After I had progressed somewhat in my pharmaceutical career, I became an observer of men, and next a critic and writer. In the latter capacity I had an opportunity to study Professor Remington's work in every phase. As an editor he was remarkably successful. One of his peculiar characteristics was brought out in a conversation which I had with him about his new 'Practice of Pharmacy.' He had been very kind to me and knowing that I was going into journalism, was discussing the various phases of it, and said, 'Now, Mayo, I have been criticized and people said that I did not write the "Practice of Pharmacy," but that A. B. Taylor wrote it. A man's personal capacity is limited; he must enlist the intelligent coöperation of other men if he wants to make a success. The Philadelphia idea (this was thirty years ago) has been that a man does not do a thing if he does not actually do it with his own hands. It is a mistake, he must do it with his brains. My book is a success inasmuch as I have directed the making of it.'

He has had throughout his life the faculty of directing and showed it in a remarkable degree in the U. S. Pharmacopœia. As an association worker I became associated with him, and I have always been impressed by his quality of being a stabilizer, as Dr. Wiley says. I have heard, at meetings, the most bitter vituperation and people have come to the pass when they called each other names. Professor Remington would step in and stabilize the discussion and point out the moderate ground where all could meet, in a way that would lead the entire discussion, by his superior insight, into the real crux of the questions. I have seen him in his home, his delightful home, especially at Longport. He had a genius for friendship. I only wish that my words were equal to my thoughts and my disposition to do justice to him. As a teacher he was unequaled; as an association worker he was the great organizer; as an editor he was careful, accurate and painstaking; as a friend he was kind, cordial and helpful.

Dr. H. C. Wood, Jr., vice-chairman of the U. S. P. committee of revision, Philadelphia:

My father was an associate and friend of Professor Remington and I cannot remember the time when I did not know Professor Remington. I have seen him at various associations and I have wondered at his diplomatic skill in difficult situations, to which Mr. Mayo has referred. I have read his books and have sat at his feet and have marveled at the breadth of his scientific knowledge. I have visited in his home and have been charmed by his genius for hospitality. I have had the privilege of working with him for fifteen years on the U. S. Dispensatory and have more recently been associated with him in the work of the U. S. P. revision committee—privileges which I highly esteem. He was a great educator, statesman, scientist and friend. He is not gone; his spirit remains with us and will remain to inspire us as long as we are left.

Prof. E. G. Eberle, editor of the *Journal of the American Pharmaceutical Association,* Philadelphia:

It is difficult to speak of Professor Remington now; he is too near for the full worth of the man to appear. We who have known him intimately for many years have suffered a bereavement that we cannot speak of in words that are adequate, but time will bring this loss into evidence. What now might seem fulsome eulogy will be found insufficient to wholly express the true character and inexpressible loss to pharmacy by his death.

Frederick M. Davenport said, 'Let none suppose that any crowd of American college boys ever sat for one year or two years at the feet of a college professor without knowing the substance of that man. There is nothing human that I know of so near infallible as the final estimate that college men put upon an instructor.'

The graduates of the Philadelphia College of Pharmacy, with few, if any, exceptions, revere Professor Remington; there are not very many teachers who retain the continued friendship of the alumni as did Professor Remington. I knew him as a teacher and almost adored him, and soon after my graduation it fell to my lot to be associated with him in one way or another, and I greatly respected him; further years brought me into closer touch and I loved him as a friend.

At this time we can speak of him best by a survey of his

activities, his relations with others, his leadership in pharmaceutical endeavor, which will give us a more unbiased judgment of the man than personal expressions that may be influenced by our deep sorrow. For half a century Professor Remington was identified with the development of pharmacy and during many years of this time, on account of his prominence, he was subject to the most critical judgment of his confreres and collaborators, and he stood the qualifying test of a competent leader and great man, which speaks more than any encomium possibly could.

Professor Remington was genial, most hospitable, amiable, forgiving. His happy humor, his kind and loving sentiments added charm to his wise, practical thoughts. A great American pharmacist has left our ranks; we have profited by his works and endured a loss by his death which will be more deeply recognized as time passes.

Dr. F. E. Stewart, chairman of the committee appointed from the Philadelphia Branch of the American Pharmaceutical Association, read the resolutions from that body, as follows:

In Memoriam

Whereas, Almighty God, in his eternal wisdom, has taken from our midst our beloved brother, Professor Joseph Price Remington, we, the members of the Philadelphia Branch of the American Pharmaceutical Association, express our deep sorrow at his loss.

Professor Remington, whose death we mourn, was an international figure in the pharmaceutical circles of the world; in his death, pharmacy has lost its most prominent chieftain. As president of the American Pharmaceutical Association and one of the founders of the Philadelphia Branch; as president of the Pennsylvania Pharmaceutical Association; as chairman of many important delegations; as a member of numerous scientific bodies in this country and abroad; as professor of pharmacy in the Philadelphia College of Pharmacy and for many years its dean; as author of 'Remington's Pharmacy,' a textbook wherever pharmacy is taught; as chairman of the committee of revision of the United States Pharmacopœia; as joint author with Professors Sadtler and Wood of the United States Dispensatory, he occupied a position of unique distinction and influence. No man left a more helpful im-

pression upon the pharmacy of the entire world than Professor Remington. In foreign countries, when the king dies the people cry, 'The King is dead; long live the King!' It is for us to cry, 'The King is dead; who shall reign in his stead?'

Resolved, That we spread this memorial upon the minutes of the Philadelphia Branch of the American Pharmaceutical Association, and send a copy of the same to his family in testimony of our sympathy and appreciation.

(Signed for the Committee)

F. E. STEWART, M.D., Phar.D.,
Chairman.

Dr. Stewart then added his personal appreciation of Professor Remington in these words:

I desire to express my personal feelings, not only representing the Philadelphia Branch of the American Pharmaceutical Association, but also representing the class of 1876, this class being the one to which Professor Remington gave his first course of lectures. During the many years since that time, there has hardly been a year that I have not had an occasion to personally confer with Professor Remington, and I was always received with courtesy and consideration. His loss is a great blow to us as members of the college and members of the faculty.

Prof. Charles H. LaWall, Professor Remington's associate in the department of the theory and practice of pharmacy at the College, then spoke as follows:

I am filled with such emotion in consequence of the events which have preceded this meeting that I can do but feeble justice to the feelings in my heart at the present time. I have been associated with Professor Remington for eighteen years, probably in a closer way than many of those who have preceded me. I have worked with him, I have traveled with him, and I have played with him, because he was one of those few men who knew how to play. So few men realize that to work well one must also take a certain amount of recreation. I have learned to know, love and respect him in a higher degree than I have had a respect and love for and knowledge of any other man in the world. I have been associated with him in a teaching capacity and during those eighteen years I have been

a student at his feet, because one could always learn from him; he had such a boundless fund of information on almost every subject.

They say that he who influences the thought of his own time influences all eternity. Therefore, we know that the influence of Joseph P. Remington will go on forever, so long as pharmacy is a science.

There is another phase of his character that has not been dwelt upon, and which I knew very well. That is his cleanness of heart and soul. I never knew a man who had that innocent view of things for a man of mature years to such a degree as he had. He had that kind of cleanness that is contagious. I have observed him in gatherings of men and I have seen him enter the smoking compartment of a Pullman car, where sometimes stories are told that are somewhat *risque,* and without apparently exercising any conscious influence on the conversation, direct it into healthful channels, by his personal magnetism introducing a clean tone into the atmosphere. Therefore, I have always felt that he exemplified Kipling's phrase 'In simpleness and gentleness, in honor and clean mirth,' because if there ever was a man who was clean it was Professor Remington.

So far as his personal magnetism was concerned, everyone must pay tribute to that; it was his outstanding characteristic. He had the faculty of making friends of his enemies. 'Every pilot can steer the ship in calms but he performs a skilful task who can manage it in storms.' In piloting an association over the shoals of some apparently insuperable difficulty or some committee over the reefs of personal differences, he exercised his powers to the fullest extent.

Then followed Dr. C. B. Lowe, professor of materia medica at the college:

I have been pleasantly associated with Professor Remington for a third of a century, and during that time I have found him a kind friend whom I shall miss very much. I should like to paraphrase an author's lines, as follows:

> "Dear friend, we've lived long together,
> Through sunshine and through cloudy weather;
> Say not "Good night,"
> But in some brighter clime,
> Bid me 'Good morning.'"

Prof. E. Fullerton Cook, associate director of the pharmaceutical laboratory of the college, voiced his appreciation as follows:

In paying tribute to the memory of my friend, Joseph Price Remington, I need not cite his achievements or his services to pharmacy. These you know. I might speak of his affable manner, his keen insight into character and motives, his courage in standing unwaveringly for what he thought to be right, his infinite pains to attain perfection in the work in hand, his strong sense of duty when responsibility was accepted, and of other notable qualities; but these are to-day builded into permanent record, into this college he loved, into the U. S. Pharmacopœia of four decades, into his own publications, and best of all, into the memories we hold. They speak for themselves.

The world I wish to give, therefore, is more personal; the impressions from an intimate relationship of many years, almost as close as that of father and son. One of the outstanding facts soon recognized was that Professor Remington was deeply religious. His Quaker training had left a lasting impression. In deciding small or large questions, he would frequently speak of 'waiting for the voice,' with perfect faith in its right guidance. This belief powerfully influenced his action and kept it true to high ideals.

Another quality which I believe I may speak of here, especially since at times he was misunderstood, was the entire absence of a spirit of revenge. He was not small in his dealings with men. Yet he was not weak or afraid, for if he believed a policy pursued by someone or a group of men was not for the best interests of the profession he did not hesitate to attack it, but he did it openly and without underhand or political pressure methods. To have it insinuated that he was unfair or had taken advantage of his position, hurt him keenly, and he would frequently go far out of his way to show special consideration to those who seemed to want to believe him unfair and in his official positions he voluntarily set for himself a standard of action which was above reproach and even considered extreme and unnecessary by some of those who knew his customs and convictions.

One of the charms of his personality was his appreciation of humor and his stories are repeated broadcast, but those who came into intimate contact with him were soon impressed by the elevated

and moral plane upon which he kept his stories and his thought. He never sought nor liked it when tainted and never passed it along.

The passing of this brilliant life has left a vacancy hard to fill, yet one of his life passions and greatest pleasures has been to teach others and he went without a fear for the future of pharmacy, for he knew that thousands all over the world, 'his boys,' would carry on the work he loved. Thus his last and probably greatest lesson to us is that by giving one's self one may attain immortality.

Dr. S. P. Stout, a graduate of the college, spoke as follows:

I met Professor Remington frequently, especially during college days, but during the last three or four years I met him as man to man. The last time I saw him was in his home last spring. After we had finished our business, I said, 'I expect to go to war.' His face lighted up and he said, 'I would like to go with you. When I get rid of this "plumbago" (he jokingly called it that) perhaps I will be all right again.' I told him I was going in the Roosevelt Division, and he gave me a wonderful insight into Roosevelt's character.

I came to-day because I have a telegram in my pocket directing me to one of the military camps in a few days. I want to add my tribute. Such men as he have done and are doing a great deal to keep the professions of medicine and pharmacy on a high standard where they belong. President Wilson said we are entering this war to make the world safe for democracy. These men have toiled to make the world safe for professional men. There are too many charlatans and quacks who are trying to make gain out of the misfortunes of others. Many of you have to-day spoken of Maisch, Remington, Wood and Trimble. In the immortal words of Lincoln: 'It is for us, the living, to be here dedicated to the great task remaining before us, that from these honored dead we take increased devotion to the cause to which they gave the last full measure of devotion.'

Lastly, Professor F. X. Moerk, professor of analytical chemistry of the college, paid his tribute to Professor Remington:

My personal knowledge of Professor Remington dates back to the session of 1880–81, when Mr. Charles F. Kramer, then a senior student, took me to the college one evening, and I first saw Pro-

fessor Remington and later Professor Sadtler, the lecturers of the evening. A few months later, a prescription was brought to the store in which I was employed, calling for an ointment of unknown formula, and I was sent to Professor Remington's store at 13th and Walnut Streets, for information regarding the same. While walking along 13th Street, my attention was drawn to a gentleman coming toward me, who I thought might be Professor Remington, if he had had a full beard. I addressed the gentleman and sure enough it was he. Upon explaining my errand, he stated that Mr. Charles Frederick Zeller, his assistant, would be pleased to give me the desired information.

In the fall of 1881, I entered the college and during my student career frequently consulted Professor Remington at the college and at the store and felt that he always took an interest in me. Since graduation, I have continuously held some position in the college, but during the past few years, since my appointment as assistant dean, I have been in close touch with Professor Remington, and during the many, many conferences which were necessary, not a harsh or cross word was uttered. I gladly join the other speakers in paying tribute to one who always upheld the interest of the college.

After the telegrams given below, which had been received by the College and Mrs. Remington, were read, the meeting adjourned, with sad hearts and a feeling that there was a vacancy in the scheme of things pharmaceutical that will be felt for many many years to come.

TELEGRAMS RECEIVED BY THE COLLEGE AND MRS. J. P. REMINGTON.

The Secretary of the Philadelphia College of Pharmacy: The President and members of the Nova Scotia Pharmaceutical Society desire you to convey their sympathy to Professor Remington's family and friends. We have pleasant recollections of the Professor's visit to Halifax a few years ago, when we learned to esteem his personal qualities as highly as his professional. We unite with you in mourning his loss.

G. A. BARBRIDGE, *Secretary.*

President Howard B. French: For the American Conference of Pharmaceutical Faculties, I express the sympathy of the colleges of pharmacy in the United States to you and the members of the P. C.

P., in the death of Professor Remington. He was the most magnetic personality of the century in American pharmacy.

HENRY KRAEMER, *President.*

TO THE FACULTY AND MEMBERS OF THE PHILADELPHIA COLLEGE OF PHARMACY:

Dear Sirs: I hereby express my sincere sympathy on the death of your dean, Professor Joseph Price Remington, a man who exemplified pharmacy in the United States as Hager did in Germany, and who always placed the interest of pharmacy above his own interest, and whose work will be a living monument to those who are inclined to follow his footsteps hereafter, and who personally always practiced and followed the Golden Rule, namely, "Do to others as you expect to be done by," and without being vindictive to those who differed with him at times. In Professor Remington's death a teacher has been lost who will be very hard to replace. Again expressing my sincere sympathy, I remain,

Respectfully,

GEORGE DECKER, representing
The German Apothecaries' Society of New York,
N. Y. State Pharmaceutical Association,
Alumni of the New York College of Pharmacy.

Prof. S. P. Sadtler: Serious illness prevents my leaving.

COBLENTZ.

G. M. Beringer: I regret that indisposition prevents my paying my respects to the memory of Professor Remington, who was my tutor in 1873 and my esteemed and respected friend for nearly forty-five years. His death is a sad loss to the pharmaceutical profession and to me a personal sorrow.

SAMUEL W. FAIRCHILD.

Mr. G. M. Beringer: The whole world grieves at the loss of its greatest pharmacist. The Atlanta College of Pharmacy will remain closed on Friday, the day of the funeral, as a token of grief and sorrow. Have notified all our papers.

GEO. F. PAYNE.

The Northwestern Branch of the A. Ph. A. express deepest sympathy in your bereavement.

CHAS. H. ROGERS, Minneapolis, Minn.

Mr. Charles H. LaWall: I want to thank you for the information regarding Professor Remington's death. It grieves me greatly that I am unable to be present at the memorial services of this really great man. Our alma mater has lost a faithful and potent son, whose geniality and influence brought her much renown. May the seed he has sown ever bring bountiful harvests.

LOUIS EMANUEL.

Mrs. Joseph P. Remington: The Meyer Bros. *Druggist* joins other pharmaceutical publications in extending you sympathy in your bereavement. Your late husband, Professor Joseph Price Remington, worked throughout his long life in promoting the welfare of pharmacy. This is a common cause with the pharmaceutical press.

HENRY M. WHELPLEY.

Mrs. Joseph P. Remington: The officers, board of trustees and faculty of the St. Louis College of Pharmacy direct me to express their sincere sympathy in your bereavement. Professor Remington was a personal and valued friend of this institution. The Professor honored us with addresses on several occasions.

HENRY M. WHELPLEY.

Mrs. Joseph P. Remington: The Minneapolis Retail Druggists' Association extend you our heartfelt sympathy in this time of your bereavement in the loss of your husband and father. The memory of Professor Remington will be cherished by pharmacists of the world, the fitting monument of his long and useful career as an educator.

HENRY RAUCH, Sec. M. R. D. A.

Mrs. Joseph P. Remington: The Minnesota State Pharmaceutical Association extends deepest sympathy to you and family during your hour of sorrow.

E. L. NEWCOMB, *Sec.*

Mrs. Joseph P. Remington: We loved and admired Joseph P. Remington, both for his splendid abilities and his personal charm. The world has lost its greatest pharmacist and we one of our most beloved friends.

GEO. F. PAYNE.

Mrs. Joseph P. Remington: With extreme sorrow announcement of your loss is received. A life full of good works, the death of our professor will be mourned by and mark a serious loss to American pharmacy.

H. LIONEL MEREDITH, Hagerstown, Md.

MRS. JOSEPH P. REMINGTON.

Dear Mrs. Remington: I am advised by the National Drug Trade Conference that owing to the fact of a very important meeting going on at the present time it will be impossible for these delegate members of that organization to attend the funeral of Professor Remington. Dr. A. R. L. Dohme has named as a Committee from the American Pharmaceutical Association to attend the funeral, Messrs. H. P. Hynson, John F. Hancock, S. L. Hilton, H. M. Whelpley and E. G. Eberle.

The National Drug Trade Conference and Dr. A. R. L. Dohme desire me to express their great sorrow and deep regret over your bereavement and to extend to you and all of your family these expressions of sympathy.

Respectfully,

E. G. EBERLE.

Mrs. J. P. Remington: My sincere sympathy. A great man has passed away.

FRANK G. RYAN,
Detroit, Michigan.

Regret I cannot attend services owing to serious illness of wife. Both greatly moved over loss.

V. COBLENTZ,
Long Branch, N. J.

Our deepest sympathy is with you in this hour of sorrow. May He whose love endureth forever solace you.

MEYER BROS. DRUG CO.,
St. Louis, Mo.

Mrs. J. P. Remington: Extend to you and each member of your family heartfelt sympathy at this hour of bereavement. Regret that conditions of travel make it impossible for me to attend funeral. Have ordered a suitable wreath on behalf of American Conference of Pharmaceutical Faculties.

HENRY KRAEMER, *President.*

Mrs. J. P. Remington: Kindly accept the sympathy of the boys in the twin cities, who were students under Professor Remington at the P. C. P. Our hearts go out to you in this sad hour of your bereavement. Dean Remington is no more; the sympathetic voice which we all knew and loved is no more, but his spirit lives and breathes an inspiration to us all. The warmth of his last hand-shake will linger like a benediction until in that realm revealed to us by faith, we again join the hands of the spirit in the light of the morning that shall have no end.

Sincerely your friends,

E. L. NEWCOMB,
F. J. WULLING,
C. M. MCCOY,
H. H. GREGG,
C. T. HELLER,
W. D. KELLY,
F. E. ALLEN,
G. M. RUSSELL,
J. W. SMELTZER.

Mrs. J. P. Remington: Please accept my deepest sympathy in your sad bereavement.

CHAS. E. CASPARI,
St. Louis, Mo.

COMMUNICATIONS RECEIVED AFTER MEETING.

Prof. E. Fullerton Cook:

Desire to extend most sincere expression of condolence death of Professor Remington.

FLORENTINO LOPO FUNDORA.

Havana, Cuba.

DEPARTMENT OF AGRICULTURE,
BUREAU OF CHEMISTRY,
WASHINGTON, D. C.,
January Ninth, 1918.

THE TRUSTEES AND FACULTY,
PHILADELPHIA COLLEGE OF PHARMACY,
Philadelphia, Pa.

Gentlemen:

In behalf of the Bureau of Chemistry, and of myself personally, permit me to express to you the sympathy of the Bureau in the great loss that has come to your institution through the death of Professor Joseph P. Remington.

We, here in the Bureau, who have been working with him in his fundamentally important revision of the pharmacopœia have an adequate appreciation of his great services to pharmacy, to medicine, and to the country, generally. His loss will be felt far beyond the circle of his personal friends and colleagues.

Yours sincerely,
CARL L. ALSBERG.

ACTION TAKEN BY THE NATIONAL DRUG TRADE CONFERENCE.

In Memoriam

Professor Joseph Price Remington.

The funeral of the late Professor Joseph Price Remington occurred at Philadelphia, Friday, January 4, 1918, at one o'clock P.M. The National Drug Trade Conference, then in session at Baltimore, adjourned for two hours, out of respect to the eminent deceased; and upon reconvening at three o'clock adopted the following resolutions reported by the committee named by a standing vote.

Whereas, In His wisdom it has pleased Almighty God to take from our midst our distinguished and highly esteemed friend and fellow pharmacist, Joseph Price Remington, and

Whereas, The services which Joseph Price Remington has rendered the people of this entire country, the profession of pharmacy, the entire drug trade and the many thousands of young men who have enjoyed the privilege of being his pupils have been of unusual prominence, extent and excellence, and

Whereas, The Revision Committee of the United States Pharmacopœia has been especially benefited and assisted by his eminent qualities as leader and chairman during a period of over twenty-five years, and the American Pharmaceutical Association has enjoyed his wise counsel and sincere help and support as member, councillor and president, and

Whereas, The International Pharmaceutical Conference has for many years enjoyed the advantage and benefit of his varied experience and advice, and

Whereas, All the many interests and branches of pharmacy and the drug trade have by his demise suffered a great and irreparable loss, and his many thousands of friends in this country and abroad have lost and will sadly miss that ever-present and always encouraging smile and pleasant word which was so characteristic of Professor Remington and has smoothed over so many rough and stony spots in the life and career of his pupils and friends, and

Whereas, It seems incredible and difficult to conceive that his

many friends, associates and pupils will never in this life again see the genial countenance and grasp the warm friendly hand of our departed friend, now be it therefore

Resolved, By the National Drug Trade Conference in meeting assembled on this the day on which his mortal remains shall be transferred to their last resting place in that city of brotherly love in which he has spent practically all his many useful happy years, that in his death, pharmacy and the drug trade and this Conference have lost one of their most prominent and distinguished representatives and friends, and be it further

Resolved, That this National Drug Trade Conference hereby gives expression to its feeling of sorrow at the loss it has sustained through his death and of sympathy with his family in their great bereavement, and be it further

Resolved, That a copy of these resolutions be spread upon the minutes of this Conference and as well that a copy be sent to the family of our deceased friend and to the pharmaceutical press.

Respectfully submitted,

DR. A. R. L. DOHME, *Chairman,*
SAMUEL C. HENRY,
R. C. STOFER,
JOHN C. WALLACE,
FRANK E. HOLLIDAY.

MEETING OF THE NEW YORK BRANCH OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.

In Memoriam.

Charles Holzhauer. Joseph Price Remington.

The New York Branch of the American Pharmaceutical Association on Monday evening, January 14, 1918, held a memorial meeting in honor of Charles Holzhauer and Joseph Price Remington in the Lecture Hall of the New York College of Pharmacy. Elaborate arrangements had been made and the meeting was well attended by members of the Branch, prominent speakers and other friends.

The proceedings were opened promptly at 8:30 o'clock by President Mayer. In a few well-chosen words he explained the objects of the meeting and briefly reviewed the life and accomplishments of the deceased. He then introduced Dr. Henry H. Rusby, dean of the New York College of Pharmacy, as the first speaker. Dr. Rusby related his lifelong friendship with both Mr. Holzhauer and Professor Remington and his deep regret that pharmacy should lose two such men.

The next speaker was Edward A. Sayre, friend and neighbor of Mr. Holzhauer and admirer of Professor Remington. Mr. Sayre spoke at length of the fine qualities of Mr. Holzhauer, of his quiet demeanor and his philanthropic activities. He then paid homage to Mr. Remington, dwelling particularly upon his wonderful work.

Mr. Charles Schleussner was the next gentleman introduced by President Mayer. Mr. Schleussner, a classmate of Charles Holzhauer, related a number of interesting anecdotes of their college days and spoke of the shock he received when he heard of his friend's sudden demise.

Mr. Eugene Eberle, editor of the *Journal of the American Pharmaceutical Association,* then in touching words dwelt upon his deep admiration for the departed and of the great sorrow and loss to pharmacy which they left behind them.

Dr. Alfred Dohme, acting president of the American Pharmaceutical Association, was the next speaker. He spoke particularly of the aims which the departed Mr. Holzhauer was striving for when his regime as president of the American Pharmaceutical Asso-

ciation was brought to such a sudden termination. The speaker described the fine qualities of Joseph Price Remington, his work in the Association and his work in general.

A letter from Mr. George M. Beringer was next presented and read by the secretary. Mr. Beringer explained that due to an accident he greatly regretted being unable to attend the meeting. He enclosed, however, "An Appreciation of Professor Joseph Price Remington" and "A Tribute to Charles Holzhauer," which were read by the secretary.

AN APPRECIATION OF PROFESSOR JOSEPH P. REMINGTON.

In the death of Professor Joseph P. Remington, American pharmacy has lost its most renowned advocate and its most prominent teacher. No man has exerted a greater influence in pharmaceutical circles during the past quarter of a century than has this illustrious pharmacist whose earthly career ceased with the first day of the year.

Joseph P. Remington was in the truest sense of the term a "self-made man." Gifted by nature and with a laudable ambition, by personal effort and study he overcame the handicap of having been compelled, because of the decease of his parent, to leave the Central High School of Philadelphia without having completed the four years' course. His practical pharmaceutical training was under such prominent men as Charles Ellis and Dr. E. R. Squibb. His association during the formative period of his early manhood with many of the leading pharmacists of that time undoubtedly had a decisive influence upon his future career.

As the assistant of those pioneer teachers of pharmacy, Professors Procter and Parrish, he received an inspiration and as the successor of these eminent men it became his duty to develop their plans and ideals and to him must be accorded the credit of having firmly established the teaching of the theory and practice of pharmacy.

As a teacher Professor Remington was justly celebrated for his ability and success in that field of labor. During the nearly fifty years that he devoted to teaching pharmacy, he has instructed more students than have listened to any other teacher in that profession. His presentation of the subject matter of his lectures was always clear, the experiments and illustrations appropriate and very commonly the facts were driven home by some apt story or anecdote that made their retention more easy. He never missed an opportunity of impressing upon his classes the responsibility of the pharmacist and his students were thoroughly imbued with the ethics of their calling. Not the least important service that Professor Remington has rendered to pharmacy was through his personal contact with students. By his personality he won their esteem and enjoyed their confidence in a very large extent and

was thus able to help them and to guide many over troublesome situations. His genial, kindly, fatherly advice has been of incalculable value to many who are now engaged in the drug business and by their example his influence will continue to be exerted on the oncoming generations of students.

Professor Remington's literary works are recognized as standard authorities. His editing of the pharmacy of the United States Dispensatory has been very satisfactory and his "Practice of Pharmacy," of which the sixth edition has recently been published, is deservedly the most popular textbook on pharmacy.

Possibly the most valuable public service of Professor Remington has been as chairman of the committee of revision of the United States Pharmacopœia. The advances made in the Eighth and Ninth Revisions were indeed marked, and a large portion of the credit for this is due to his indefatigable labors as the chairman. To fill this responsible position was no easy task and the trials and worriment associated therewith have doubtless shortened the life of the chairman.

He possessed to a remarkable degree the faculty of judging the character and ability of men and to understand their peculiarities and preferences. It was this ability to judge men and his study of his associates as well as his students that was in a measure the secret of his influence. It enabled him to enthuse his colaborers and to obtain their best efforts and therein was largely his success as chairman of the revision committee.

It was my privilege to enter college as a student under the professor in 1878, and later, as a trustee of the Philadelphia College of Pharmacy, I became more intimately acquainted with his work as a teacher. Later as a member of the committee of revision of the Pharmacopœia and in numerous other ways we were thrown much together and so I became even better acquainted with the work and spirit back of the man. It is a great satisfaction to know that he lived to complete these great life works and to learn of the appreciation of the world of his labors thereon. We can at this time feel only the great loss that we have all sustained in the decease of our captain.

"My Captain does not answer, his lips are pale and still,
My father does not feel my arm, he has no pulse nor will,
The ship is anchor'd safe and sound, its voyage closed and done,
From fearful trip the victor ship comes in with object won;
Exult O shores, and ring O bells!
But I with mournful tread,
Walk the deck my Captain lies,
Fallen cold and dead."

A TRIBUTE TO CHARLES HOLZHAUER.

At the first meeting of the New Jersey Pharmaceutical Association that I attended, it was my pleasure to meet Charles Holzhauer. His forceful manner and the logical and sound arguments that he presented in the dis-

cussions that took place attracted my attention and proclaimed him a leader. At each subsequent meeting of that Association and at the Annual Conventions of the American Pharmaceutical Association and whenever we would meet at other places we were much together. Our relations thus become gradually more and more intimate and ever closer and dearer to me became the bonds of our friendship.

The Creator implants in each human being an individuality, composed of both mental and physical attributes, which by development become the personality and make the character of that person and determine the fulfillment of his life's service and his contribution to the moral and material progress of the world. In Charles Holzhauer we had an exemplification of the personal development. During his life there were many unselfish services rendered to aid, encourage and to better the conditions of others. Many of these deeds were performed in a most quiet and unassuming manner, and though unknown even to his nearest friends, have been recorded with Divine approval.

In Charles Holzhauer there was a distinct, well-developed personality that always commanded respect and attention and ever won the esteem and admiration of his fellowmen and continually widened the circle of his influence. His interests were many and very varied and in all of these various associations, either in business, pharmaceutical or religious circles, while never seeking self-advancement, he shirked no duty and always accepted his full share of the responsibility and labors of each organization.

Pharmacy in America is yet, necessarily, a many-sided vocation calling for the exercise and development of different qualifications in accordance with the services required of the individual pharmacist. Charles Holzhauer personified the ethics of the business of pharmacy. Upright, conscientious, exact in all of his dealings, he profited not only financially but was especially rich in possessing the good will of his patrons and friends. His work and reputation will fill a peculiar niche in the archives of American pharmacy.

While possessing very positive views and holding firmly to his convictions, nevertheless, he welcomed the opinions of others and was anxious to learn the reasons of those who differed with him, and he was always fair in debate. He was a keen observer, cognizant of the frailties of human nature and with a broad experience with many men. He had a noble spirit, a generous nature and high ideals, coupled with a solidity of character and an unusually sound judgment. It was this "good sense" that made his opinions prized and for which his advice was so generally sought alike by associations as by individuals. It was this happy faculty, this ability as an adviser, that made him the leader among men, which was probably more noticeable in the New Jersey Pharmaceutical Association than elsewhere. In his kindly and generous way he dispensed his advice and frequently this was accompanied with material assistance. He was thus a "big brother" to many.

It is sad to realize that his desire to give one year of his best efforts as President of the American Pharmaceutical Association could not be realized.

If he had been spared to mature and to carry into effect his plans for the year with his usual energy, it would doubtless have been a great benefit to the Association.

The sudden summons, the hasty translation of the noble spirit of Charles Holzhauer was a severe shock and keenly have we felt the loss of this good man and true friend. We must, however, recognize that his aim in life, his example and what he strove for remains. Who can place an appropriate estimate on the value of his life so devoted to duty?

"The longer on this earth we live
And weigh the various qualities of men,
Seeing how most are fugitive,
Or fitful gifts, at best, of now and then,
Wind-wavered corpse-lights, daughters of the fen,
The more we feel the high stern-featured beauty
Of plain devotedness to duty,
Steadfast and still, nor paid with mortal praise,
But finding amplest recompense
For life's ungarlanded expense
In work done squarely and unwasted days."

Letters from Professor Virgil Coblentz and Professor Day expressing their deep sympathy were also read.

The next speaker was Professor Henry V. Arny. Professor Arny spoke of his admiration for his former teacher, Professor Remington, and of the irrevocable loss to pharmacy caused by his demise. The speaker contrasted the characteristics of the two men, emphasizing their common quality of loyalty and devotion to the American Pharmaceutical Association.

Mr. Clarence O. Bigelow then in a few words dwelt upon the many fine qualities of the deceased and upon his feeling of the great loss inflicted upon our profession.

Prof. Charles H. LaWall, president-elect of the American Pharmaceutical Association, was the next speaker. He related many interesting and appealing anecdotes of his close relation to Professor Remington. He spoke of the latter's last days at the Philadelphia College of Pharmacy and of his great work as chairman of the revision committee of the U. S. P. IX. He also spoke of his admiration for the departed Mr. Holzhauer.

Mr. Joseph W. England then read the following tributes:

JOSEPH P. REMINGTON.

When a man of the prominence of Joseph Price Remington passes into the Great Beyond, the impulse of those who knew and loved him is to pay tribute to his worth and work. The first is easy, because "out of the heart the mouth speaketh" and love finds ready expression; the second is difficult, because it takes time, and a long time, to properly estimate the full value of a life's work. It is very much like viewing a beautiful painting. Its real beauty can only be seen by standing at a certain distance from it and getting the proper focus. So it is with the work of a human soul. The future historian is best qualified to sense human values; the present-day observer is too close, too much influenced by the lights and shadows of personal relationship.

Therefore, I would speak of the worth of our departed friend, rather than of his work and its dominating influence upon American pharmacy. To know him was to love him. His charming personality, his fine tact, and his ability to make all those who came within the magic circle of his influence feel that here was a man and here a true friend—these were striking characteristics of him and they all "rang true." They did not spring from motives of policy. They came from a soul reared in a Quaker atmosphere full of love of humanity. He had his faults; we all have ours. To use an Irishism, the man who has no faults is not faultless; he has the fault of inertia. The strong, positive man is intensely human, and being human, cannot be perfect. The big thing is that such a personality inspires others to be kind, to be generous, to be considerate, to be friendly, to be helpful; and what is more, makes life better worth the living to countless thousands, as the influence of such a life spreads far and wide, like the ever-widening circles of a stream into which a stone is cast.

The outstanding features of Professor Remington's personality were, it seems to me, three in number—his unusual ability, his unusual force of character and his unusual courage.

His ability was inherited and acquired. He had a keenly retentive memory, and a fine, discriminating judgment in appreciating the relative values of facts. He was exceedingly painstaking in his consideration of details. He had a deep knowledge of the science of his profession coupled with rare executive capacity, an unusual combination of scientist and executive; and he knew, as no other, the possibilities and limitations of every active research worker in American pharmacy. He had practical experience in all the branches of pharmaceutical practice—the retail, wholesale and manufacturing, and acquired thereby unusual breadth of view.

His force of character was unusual. Strong and positive in his opinions, he was not hasty in forming them, and was tolerant of the opinions of others, and exceedingly patient. His anxiety was to be right in his decisions and to play fair with his opponents. He believed that might may win for the mo-

ment, but that right, eternal right, which is only another name for Truth, triumphs through the centuries. He never grew "stale." He always kept young by associating with young people.

He had unusual courage. At a meeting of the board of trustees of the Philadelphia College of Pharmacy held last spring, I asked Professor Remington as to his physical condition and expressed my sympathy. He replied: "I am near the end of my life!" He said this calmly and with a smile. He was "At the End of the Trail," as exemplified by the wonderful statue of that title at the San Francisco Exposition, typifying the final extinction of the Red Man—the Indian on a pony, both "all in," utterly exhausted, incapable of going further, at the brink of a precipice overlooking a dark valley. And the point is, he spoke of his "passing" without a trace of fear—with a smile on his lips and immortality in his eyes. He was unabashed and unafraid of Death, ready to go down into the Dark Valley and face his Maker! This was courage, real courage, unusual courage. And such a courage he exhibited time and time again in the crises of his life.

And now he is gone. "We ne'er shall look upon his like again." But the world's work must go on. American pharmacy has grown more during the past fifty years than ever before and it must grow still more during the coming years, or perish. Therefore, let us catch inspiration from the lives of such men as Procter, Parrish, Squibb, Rice, Maisch and Remington, and let each one of us do our utmost to promote the growth of American pharmacy in its best estate. We cannot all be leaders, nor need be, but we all can be workers, and if each one works to his fullest possible limitations—and no man really knows his own possibilities—God only knows—the future will be safe for sick humanity.

CHARLES HOLZHAUER.

There are men in every walk of life who are not conspicuous in the public eye and yet who wield unusual influence. They are the quiet, modest, unobtrusive, deep thinkers, with high ideals and excellent judgment, and enthusiastic in service—men whose opinions are ever in demand, men who mould public opinion. They are the balance wheels in organization-life, the men who hold the balance of power between the ultra-radicals and the ultra-conservatives, and make for constructive progress. Such a man was Charles Holzhauer, an honor to himself and a credit to his craft. He served his God and his fellowman with rare zeal and industry, and we all had deep affection for his genial personality and admired him for his sterling, upright character. He loved the American Pharmaceutical Association and all that it stood for. His life's work was like the man himself—honest, useful, industrious, successful, thorough and well balanced, and he has not lived in vain.

Mr. Runyon, lifelong friend of Mr. Charles Holzhauer and Prof. Joseph Price Remington, in touching words spoke of the great loss and of his deep regret caused by the deaths of his two friends.

Finally Prof. Jeannot Hostmann, chairman of a committee appointed to draw up resolutions on the death of Mr. Holzhauer, read the following:

IN MEMORIAM.

Charles Holzhauer has answered the call which has taken him to the great beyond. Actively engaged in retail pharmacy for over fifty years he leaves behind him a record of achievements well worthy of emulation. Honest, useful, thorough, untiring—are some few of the adjectives that may be truthfully applied to his life's work. He believed in the Golden Rule, and, believing in it, he lived up to it. He was devoted to his family, to his profession, to his church, to his associations—in fact, he was devoted to everything he was interested in and he was interested in everything that makes this life worth while. His advice, often sought and usually found sound, was born of a nature absolutely unselfish and noble. Well may we repeat the words of the poet,

"To live in the hearts we leave behind us is not to die."

Insofar that the members of the New York Branch of the American Pharmaceutical Association wish to express their heartfelt regret caused by the taking away of their fellow member, Charles Holzhauer, be it

Resolved, That these words of appreciation be inscribed upon a page set aside in the minutes of this meetiing, and be it

Furthermore resolved, That the Secretary be instructed to send a copy thereof to the widow of our deceased member.

This concluded a meeting which will be long remembered by those present. It was an attempt to honor Joseph Price Remington and Charles Holzhauer, an attempt which proved a failure, for is it possible for any meeting of men to honor two such leaders as Remington and Holzhauer? Two such men who were so far beyond all? Is it not rather an impertinence for any organization of men to claim that they can possibly honor such super-men. No! The meeting proved simply to be a small touching attempt of emulators to express their admiration for Prof. Joseph Price Remington and Charles Holzhauer, departed Giants of Pharmacy.

HUGO H. SCHAEFER,
Secretary.

EDITORIAL.

A Great Leader has Passed Away.

In any calling comparatively few men reach the exalted position of national leadership. When such, however, has been attained, no matter what the sphere of activity, the world is ready to recognize superiority and to pay homage. True leadership carries with it great responsibility and the opportunity to accomplish some things noteworthy in the line of the leader's achievements and to add to the welfare and progress of the world.

America with its great natural resources, as yet, but incidentally developed, has been called the country of golden opportunities and offers in numerous avenues unequalled possibilities for achievements. Coupled with these possibilities there has been the pioneer spirit of "do and dare" unbridled by the conventional lines of caste and prestige that have been so prominent in the European nations. Consequently, we have had in this country many notable examples of success, evidenced by rapid accumulation of wealth or the achievement of influence, which we designate as leadership. America has developed her great men under different conditions and training than has held in any other country. Nevertheless, in every line of human activity our nation has developed some truly great men. Our statesmen, our military and naval commanders, our scholars, authors, and teachers, our physicians, surgeons, lawyers, and preachers, our scientists, inventors and discoverers, our artists, our actors, our captains of agriculture, industry or trade have all taken their places in the forerank with the leaders of other nations and by their work have added not only glory and renown to the United States, but have materially increased the sum of human knowledge and achievements and stimulated world progress.

American pharmacy, although associated with peculiar surroundings and conditions of medical practice that at times appeared to be hampering scientific progress, has, nevertheless, made noteworthy advances and is to-day holding up its end with the other branches of the medical profession. There has been developed a corps of pharmaceutical leaders whose professional labors and standing are universally acknowledged.

In the recent years, death has exacted an unusually heavy toll from among the leaders of pharmacy. No profession can well with-

stand the loss of men of the type of Hallberg, Wilbert, Caspari and Holzhauer and not suffer severely from the resulting disorganization. More appalling the loss, greater the disorganization, that will result from the decease of Professor Joseph P. Remington, who for many years has been recognized both at home and abroad as the commanding figure in American pharmacy.

Great leaders are not born as such. It is true that certain innate qualifications are essential, but to personal ambition and to personal efforts and developments must be attributed that success of an individual that continues to lead to advanced standing and greater influence until the goal of preëminence and acknowledged leadership is achieved. Back of all of these there must be ideals, predominant personal characteristics that point the path of progress, some perpetual spring of incentive as a guiding influence.

In the great leader whose recent decease we mourn and whose influence will extend through many generations of oncoming pharmacists, there were strong personal characteristics, some of which have been dwelt upon by his eulogists. There was, however, another well-spring upon which Professor Remington greatly relied that has scarcely been touched upon by his many sorrowing friends.

His faith in the power of prayer and his reliance upon Divine guidance and support was beautifully illustrated in an incident that occurred some years ago. We had been together one afternoon in a conference on an important question. That night, with the weight of the responsibility on his mind, he wrote to me from Longport: "I am writing this in the "sma wee" hours, but I must write you my impressions of the meeting this afternoon. You and I have a grave responsibility; we must work together. I know that you are accustomed to bear loads and that you do not trust to your own strength in your trials; neither do I; if I did, I would have been sponged out long ago. . . . Let us unite in prayer about this—I know that you look for strength from above—and this may sound strange from one whom you may have associated in your mind as thinking and believing in nothing but pharmacy—but I have for many years believed in special and definite supplication for guidance and I know that you do also."

This is only a glimpse at the inner man, the true Christian character, that shows the power that gave to him strength and endurance under most trying circumstances, and made him preëminent.

This additional tribute to the purity of his thought is due to

that great leader of pharmacy in America who in obedience to the will of the Divine ceased his earthly career with the commencement of the year. G. M. B.

Evidences of Bureaucracy and Inefficiency in Governmental Departments.

In the December number of the American Journal of Pharmacy, p. 561, appeared an editorial headed "The Departments of the Government Need the Advice of the Drug Trade." If ever there was evidence that such advice is needed it will be found in the official "Manual for Army Cooks," issued as Document 564 of the War Department, from the office of the Quartermaster General under date of November 21, 1916.

The Manual, as a whole, is excellent and serves a useful and necessary purpose. The recipes and directions are apparently clear, comprehensive and practical. Minor defects doubtless occur in these, but which are negligible and excusable. The Manual contains definitions, as do most U. S. Army and Navy manuals, and it is in the framing of these definitions that the compilers or those immediately responsible for its preparation lay themselves open to ridicule and criticism.

What would have been easier than to ask the U. S. Department of Agriculture to assist in the preparation of such definitions as come within its scope? That would have been the proper course, the course prompted by efficiency rather than expediency and adherence to precedent, which seem to be the most potent influences for harm in all governmental department work. Such was not the course followed, however, as will be realized by a few quotations representing the gems of a collection of the most crudely drawn and incompletely worded definitions of which it is possible to conceive in a government document.

"*Aniline.* Dye used in highly colored confectionery. A product of petroleum. The red shades are harmless, but the chemicals used in making blue, green and other colors are injurious."

"*Comina.* An herb found in the southwestern part of the United States and in Mexico, much used in seasoning soups and stews."

"*Ferment.* A substance capable of producing yeast fermentation."

"*Glucose.* A cheap sugar that will not easily crystallize or a cheap syrup that will not crystallize—very much like "Silver Drip," but much thicker. Glucose is often made by treating cornmeal with sulphuric acid. It is very wholesome."

"*Mace.* The inner coating of the nutmeg. It is a good flavoring for meats, cream soups, puddings and sweets."

"*Oregano.* An herb much used in seasoning soups and stews."

"*Saffron.* The petals of a flowering plant of a deep orange color. Made into a tea and added to dough or stew, etc."

It is extremely probable, indeed the internal evidences are compelling, that the definitions were drawn up by a cook, probably one who had seen service on the Mexican border, for "Comina" and "Oregano" are Spanish names for cumin and marjoram.

Could anything illustrate better the evils that result from failure to coördinate and coöperate in the interests of accuracy and efficiency, than a perusal of the above? Could any argument be more powerful in favor of having all details in governmental work handled by those most familiar with them, than thoughtful consideration of the foregoing examples?

Perhaps a study of some of the other Departmental manuals would reveal similar defects, but it is not necessary to multiply instances to convince any intelligent person that the idea of omniscience that seems to obsess so many government officials could be replaced to advantage by a willingness and desire to do what is right and do it correctly.

C. H. LAW.

THE LABORATORY IN WAR TIME.

By Dr. Fred B. Kilmer, New Brunswick, N. J.

The editor has asked me to send him some notes upon the work of a pharmaceutical laboratory in war time. It might be tersely expressed by saying that the labors of the laboratory in these times are "just one thing after another." When one arrives at his post in the morning he may anticipate that almost anything is liable to occur before the close of the day.

When the war broke out there was a general scramble. Everybody began to buy, hit or miss. If a person had anything to sell he sold it at almost any price. There was at once a shortage of raw material—drugs, chemical supplies of all sorts, corks, vials, paper, ink, labels, tinware, lumber and, in fact, everything that went to make up the wares of the manufacturer. So great was this shortage that at times systematic collections were made from retail stocks,

and manufacturers found shipments arriving at their doors consisting of boxes and bottles of all sorts and sizes and bearing marks of having passed through the stocks of the jobber and retailer.

This condition has forced the trial of numerous substitutes. The laboratory telephone is constantly ringing, and the voice at the other end reports no more of a certain article can be had and asks what can be done to keep the works going. Questions like these are puzzling to the laboratory. Substitutes are offered on every hand, but for most things there are no substitutes. The laboratory has to hold checks more than ever upon all raw materials. Materials which would be entirely rejected in ordinary times must be made to do, provided, as in many instances, they can be purified and made over. Then, with increasing tensity, we have been rationed. Glycerin, alkaloids, bleaching materials, anything and everything that enters into explosives or are in any way connected with war preparations have been cut down in supply or their use in commerce interdicted altogether.

Almost immediately upon the declaration of war the foreign countries placed an embargo upon most drugs and chemicals heretofore received from abroad, even chemicals and apparatus used in the laboratory for testing purposes. But the laboratory work had to go on. Embargoes have increased in kind and in quantity as the war progressed until at the present time they embrace even the containers in which goods are packed and the coal used under the boilers.

An interesting feature of the war has been the attempt to grow drug plants in America. Before the war manufacturers purchased their crude drugs from abroad and tons were piled up in their storehouses. When the supply was suddenly shut off, everybody said at once, "We will grow our own plants." They soon found that drug plants will not grow on paper or by word of mouth. At once there was an increased interest as to the source of the plants which supply our materia medica. We remembered that attention had been called, especially in the AMERICAN JOURNAL OF PHARMACY, to the decreasing supply of medicinal plants at home and abroad and we regretted that we had not heeded the warning.

In a truly American way everybody started in to grow drugs. The public press rang with extraordinary claims of imaginary profits

to be made in the cultivation of drugs; fraudulent and irresponsible statements, much more detrimental than helpful, appeared in public journals. With the source of many crude drugs absolutely cut off, many manufacturers, through their laboratories, were forced back to the land.

Since the beginning of the war much interesting work has been done in the cultivation of such drugs as belladonna, digitalis, hydrastis, stramonium, aconite and others. It has not been an easy matter to make drugs grow in a climate and in a soil under conditions far removed from that which obtains in their habitat. Little if any relief could be expected from the agricultural interests, for drug crops are a specialized crop in comparison with food products, and are limited in demand. The user found himself forced to raise supplies to suit his own needs, irrespective of any consideration of the cost or yield. This is exactly what has happened. A few manufacturers here and there have fostered the growing of certain drug plants with interesting and most satisfactory results.

I can speak specifically only in regard to the cultivation of belladonna. Upon this plant much work has been done; many experienced horticulturists and agriculturists have in a small or a large way tried their hand; a number of manufacturers who use belladonna have put in a varying number of acres and for this and for some other drugs they have succeeded in preventing an actual famine. In belladonna cultivation very extensive observations have been made with a view of increasing the alkaloidal content, in other words, in producing a strain carrying a high percentage of alkaloid, and this has actually been accomplished in a limited degree.

In the writer's experience, however, a feature of our attempts along this line has been the careful selection by assay of individual plants, collecting the seed from those which attained a high percentage of alkaloid—in some instances specimen plants have reached as high as one per cent. This selected strain can be carried along for a few years, possibly three at the most, when it will revert back to a type giving a lessened amount of alkaloid.

Drug cultivation, to be carried on successfully, must be under the control of and in conjunction with the laboratory, in fact, it is my opinion that the whole question of the cultivation of medicinal plants is, and will be for some time to come, a laboratory problem. Study and investigation is needed upon the adaption and acclimatization of medicinal plants. The culture must be studied. Questions as

to the seed, type of soil, influence of fertilizers, and cultivation must be answered. There must be developed methods of harvesting, curing and packing. The selection and breeding of medicinal plants affords a field for the widest scientific activity and gives some promise of being of great practical and economical importance.

Many other problems for the laboratory to solve have arisen out of the war. The cutting off of European supplies created a demand for new and unusual forms of products. These had to be met so far as possible. Then there arose embargoes against the exportation from the United States of goods containing specified drugs or chemicals, necessitating the formulation of products without the prohibited ingredients, shipments of which were made only to be sunk by sea-raiders or submarines.

Beginning with the onset of the European war and intensified by the introduction of the United States into the conflict, manufacturers were embarrassed by druggists who were overstocking, creating in many instances an unnecessary shortage of material. Many lines of goods which were supplied before the war in quantities sufficient to meet all needs have been entirely abandoned, and it is a question whether some of them will ever be revived. It is undoubtedly true that in many medicinal supplies we have had an unnecessary duplication with many superfluous commodities and preparations.

With the entrance of the United States into the war came the extraordinary demands from the government. By coöperation of the manufacturers, the government was induced to so change its specifications that manufacturers could meet its requirements with the facilities already in hand. The Council of National Defense rightly imposed upon manufacturers the duty of making war needs paramount, and the manufacturers met this with a spirit never before equalled in the history of the world, assuming the burden of attempting to produce millions where heretofore they had produced thousands. They changed their methods and increased their production without a question as to the ultimate outcome.

When the history of this war is finally written it will be found that the manufacturers of pharmaceutical products and allied lines are entitled to great credit for their loyalty, their quick and ready response, and for their efficiency in supplying the government requirements.

As a sort of return Congress has imposed upon the manufacturers a heavy and endless system of taxation—taxes upon their com-

modities, their profits, their capital, their incomes, their all. To the credit of these manufacturers let it be said that they have met these burdens most responsively.

Added to these complications have been enlistments and the draft making inroads on the laboratory staff and on the manufacturer's employees.

In the particular line in which I am interested the war has developed some era-making events. At the beginning of the war surgeons found themselves in strange surgical lands, witnessing unusual sights. It was necessary to cast aside previous experience and begin to learn anew. As a consequence surgical developments have revolutionized methods of treating infected wounds.

The mere magnitude of the campaigns, the conditions under which battles have been fought, the nature of the weapons employed, the unusual type of injuries, the great difference in the conditions under which medical and surgical treatment must be applied have given the practice in this war an entirely different face and it may be stated that the medical staff of all the armies of the world have met the situation.

This revolution of medical and surgical methods has called for many new appliances and preparations, or at least modification of the older forms. A goodly number of antiseptics and antiseptic preparations are among the products of this revolution. In fact, antiseptic treatment, or rather the prevention of sepsis by antiseptics, has received the greatest attention. A typical example of this is the well-discussed method of Dr. Alexis Carrel, who has evolved a method of treatment of infected wounds which bears his name. It has been stated by an English authority that the whole process of war surgery has been vastly improved by Dr. Carrel's researches.

The Carrel Method in its simplest form is a method of sterilizing wounds; a method in which an antiseptic solution is used. The solution, known as the Carrel-Dakin Solution, has been the subject of most extended discussion in medical and pharmaceutical journals. As worked out by Carrel and Dakin it is a specially made solution of hypochlorite. It has been the subject of a vast amount of misinformation in the journals and, as a consequence, many attempts to prepare it by following misleading formulas, and by those not skilled in the art of preparing such a preparation, have resulted in much confusion and at times disastrously. Indeed mixtures have been supplied under the name which are positively dangerous, and

few have been supplied that absolutely fulfill the desired conditions of the originator of the method.

An accurately and properly prepared Dakin Solution, accompanied with Carrel technique, has accomplished marvelous results. On the other hand many solutions have been supplied that are useless or dangerous.

All this has thrown upon laboratories like that with which the writer is connected a vast amount of work. Thousands and thousands of experiments had to be made in order to evolve a process by which the correct so-called Dakin Solution could be supplied to the profession in a way that would meet the requirements of the Carrel Method.

Likewise out of the war has come the use of the paraffine films for the dressing of burns—apparently simple but really working out only after a long continuous struggle.

An interesting complication which has occurred in the writer's laboratory has arisen by reason of the scarcity of cotton fiber. When the war broke out cotton was literally a drag upon the market and everybody was besought to "buy a bale." Now it takes a good round bank account to buy a bale of the commodity which only a few months ago could be purchased for a song.

It is to be expected that there will be other commodities in which there will be a shortage, some of which will undoubtedly reach the famine point.

As we go on towards the close of the war we may anticipate increasing complications. There will be evolutions and revolutions and they may come thick and fast. The only thing to do is to be prepared to meet them. One thing seems evident—that some good will come out of the conflict.

Already we see indications of an improvement in the products and methods of American pharmaceutical manufacturers. The war has been prolific in lessons of retrenchment and simplification. American manufacturers are, more than ever before, self-contained. Drugs and preparations are becoming more and more standardized; there has been the securing of a uniformity in the methods of manufacturing, packaging, and in all things connected with the art. Many useless preparations have been eliminated and more will follow.

We can stand more and more of the movement which attempts to define what is essential and what is non-essential in our American

life. We are learning more and more to eliminate waste, be it waste of energy, waste of raw material, waste in manufacture, or waste wherever it may occur. It seems to me that if there is one line of endeavor where laboratories connected with manufactories can prove their worth it is along the line of securing uniformity; efficiency in the methods of manufacturing; simplification of processes and details; elimination of waste and the conservation of energy.

A PROCESS FOR THE DEODORIZATION OF THE CRESOLS.

(Preliminary Paper.)

By James F. Couch, Washington, D. C.

The official mixture of the three isomeric monohydroxyl derivatives of toluol which is commonly called cresol is one of the more important antiseptics in common use. It forms the principal active agent in the pharmacopœial Liquor Cresolis Compositus and in the various trade modifications of that mixture and is, perhaps, the chief parasiticidal substance in the extensively used sheep dips. It is stated to be more germicidal than phenol and no more toxic while, in price, it has a decided advantage over its lower homologue. Cresol has proven highly satisfactory for many purposes; at present it is used in enormous quantities. The compound solution is to be found on every surgeon's shelf, in every hospital, and especially in the equipment of all veterinarians.

The great disadvantage of cresol which has prevented a still more extensive and varied use is the odor of the substance, which is intolerable to some and disagreeable to most people. If this factor were absent the substance might be advantageously used in a number of products and in processes from which it is now barred. It might be employed for the disinfection of dairies, for instance, without danger of communicating its odor to milk or butter.

Another disadvantage lies in its insolubility in water, which necessitates the addition of a soft soap to hold the cresol in solution. There are two objections to this addition of soap. The cost of potassium soaps is now excessive and sodium soaps are not as efficient

emulsifiers in this case: the presence of soap in the solution causes a milkiness when the compound is diluted with a water which contains calcium salts. This milkiness is particularly undesirable.

In view of these facts it was thought desirable to investigate the possibility of removing the odor without decreasing the germicidal powers of cresol. It was found that this is possible and a process is described below by means of which this end may be attained.

Equal weights of cresol and concentrated sulphuric acid are slowly mixed in an earthenware or glass vessel when considerable heat is evolved. Mix thoroughly and heat at a temperature between 75 and 110 degrees C., preferably on a steam or water bath, although there is no objection to direct heat providing the temperature is kept within the limits stated. The heating is continued until a drop of the liquid mixed in a test tube with water shows only a faint cloudiness. If any separation of oily drops occurs the heating must be continued, unless it is known that the cresol contains a large proportion of hydrocarbons. The length of time necessary for the completion of the reaction varies with the quality of the cresol taken but will not exceed fourteen hours and, with good grades of cresol, is six to seven hours.

When this stage is reached the reaction product is to be mixed with five volumes of cold water and need not be cooled before being added to the water. If any oily matter separates it should be removed. The diluted mixture is neutralized with milk of lime and allowed to stand for twenty-four hours to allow the calcium sulphate to precipitate. The clear liquid is decanted off and the sediment is washed, the washings are added to the main portion of the liquid. This is now evaporated to dryness on a steam or water bath. Direct heat is not permissible, for the compound burns easily with the regeneration of the cresol odor. The dry residue is dissolved in a little water and tested for odor. If an odor still persists it must be evaporated again to dryness and again tested. This procedure is necessary to get rid of naphthalenes and pyridines, which are frequently present in cheaper grades of cresol and which are strongly odorous. When the residue shows no odor on solution in water it is diluted with water to twice the volume of the cresol originally taken and the calcium is precipitated by sulphuric acid. This must be done very carefully to avoid even the smallest excess of the acid

in the solution. It is better to leave a small amount of calcium unprecipitated than to have an excess of sulphuric acid present. The mixture is allowed to stand a day and is then filtered, the residue being washed and the washings added to the main filtrate. This may then be adjusted to any desirable volume or weight. If desired, a sample may be analyzed for calcium and for sulphonic acids in the ordinary manner and the proportion of active matter calculated as meta-cresol monosulphonic acid after subtracting the amount of sulphuric acid present as calcium sulphate; from which data a standard strength may be adopted. In practise, however it is easier to make the solution up to the same volume as the cresol originally taken occupied.

In this way there is obtained a golden-yellow liquid with at most a faint odor of leather but absolutely none of cresol, naphthalene, pyridine, or other disagreeably smelling substances. In reaction it is very faintly acid.

It consists of a mixture of the monosulphonic acids of the three cresols of which acids six are possible and probably are all present in varying proportions. As they are very soluble in water it is difficult to obtain them in crystalline form and it would be nearly impossible to separate them one from another. The relative power of these compounds against the lower forms of vegetable life has not been determined, so that I cannot state what proportions of them would be most effective. A preliminary titration of the deodorized cresol against *B. coli* has, however, shown that the phenol coefficient of the solution is considerably increased by the chemical treatment. Further investigations on this point against other organisms and experiments to determine the relative toxicity of the deodorized cresol towards higher animals are in progress and will later be reported.

Since no addition of soap is necessary in this formula and the calcium salts of the acids are all soluble in water the compound will not become cloudy when mixed with hard waters. This is decidedly an advantage over the official solution. The elimination of the soap as an ingredient further makes it possible to prepare the deodorized solution at a much lower cost. It may be employed in all cases where the official compound solution is now used and with as great effectiveness in the same proportions.

THE METRIC SYSTEM AND INTERNATIONAL STANDARDIZATION.[1]

By Herbert T. Wade.

Those who have observed the industrial and commercial changes that so far have taken place in the countries affected by the war have remarked the progress that has been made towards policies of more general standardization, not only as regards munitions but with a large number of articles, materials, and machines for general use. Such a policy not only is required by enforced economies, but also is in line with ideas of modern mechanical efficiency. The conclusion of the war will find firmly intrenched in many countries a certain number of standards and policies of standardization, so that in the replacement and manufacture of the various commodities required, there will be inevitably an increased conformity to standards, yet at the same time there will be a most apparent lack of single and uniform standards. While the question of international standards is now figuring to a greater extent than ever previously, and a more general conformity to such as are or will be established is inevitable. yet it must be considered also that international standards should be the best standards. As a result today international committees are conferring, and in all branches of mechanical, industrial, and commercial activity, the feeling is becoming general that international standards must be established and a general conformity thereto observed.

Any policy or system of standardization must be based on a fixed and determined system of weights and measures and therefore it finds an important place in any discussion of the metric system. However, it envolves far more than a system of units of weights and measures; it implies the fixing of sizes, of physical and chemical characteristics, of methods of packing and transportation, and of absolute and relative efficiency, and in fact any and all attributes of the articles and materials which figure in trade and industry, and in regard to which a number of minds can unite to formulate a definite description or specification. Let us consider a few examples. There are the standard units of length; the International Meter and the British Imperial Yard, and the subsidiary units and standards

[1] A paper presented at the annual meeting of the American Metric Association, held in Pittsburgh, December 28–29, 1917.

of length derived from them; there are the kilogram and the various pound standards; there is the standard of illumination, the candle-power; there is the standard bushel of grain or vegetables; there is the standard bale of cotton or barrel or sack of flour; the standard specifications for cement; standards for petroleum products; standards for railway materials; and in short standards for numberless articles and materials that figure in science and industry. In these standards, selected at random, and in the case of numberless others that could be mentioned, there are two important points to be appreciated. First, that an essential element of the definition or specification is one or more units of weight or measure; and second, that the standards familiar to us are but rarely arranged on a basis of harmony and logical interrelation either with each other or with any special system. For this reason in considering standards in their almost infinite variety, comparatively few will be found that have international application, or that have been established on some scientific basis, or deduced along logical or universal methods. Yet such standards are unquestionably demanded and must be provided for international use, and in proof of this statement one has only to consider the industries where efficient and international standards are observed and compare them with those where such a condition does not exist. Accordingly, to formulate and establish standards that will secure universal availability and application, is today an industrial duty of prime importance. Indeed it is largely with this object that each large industrial nation maintains a national bureau of standards or some similar institution for technological research in which problems of standardization are an important function.

The prime qualifications of standards must be that they are fundamental, invariable, logically developed, readily understood, and universally accepted. Where there is a meeting of the minds of those concerned as to the general and determined nature of the product, standards can be established irrespective of the fundamental units used in their determination. Such standards, however, cannot be the best and universal standards, unless they are based on principles universally understood and logically developed. Accordingly therefore, it is necessary at the outset to consider all policies of standardization with regard to the fundamental units, and the fundamental systems of units which underlie their determination.

It is in this respect that the metric system finds special application and, what is more, it must be considered as a prime essential

of every system of international standards now or later to be established. Today minute and precise measurements and exact determinations practically invariably are in the metric system or are related to it, because that system is the universal and only system of the scientist and investigator. This is the case because workers in pure and exact science long since have appreciated the advantages that not only are appropriate to the metric system itself, but are characteristic of an international and interchangeable system of weights and measures. Inasmuch as any system of standards must depend upon exact determinations and precise measurements, and as the units, standards, and methods of such precise measurements and determinations employed by the scientific man are metric, it is inevitable that they should figure in the initial and basic work in practically all cases, whatever the nationality of the investigator.

This is true not only because the metric system is the system of the research laboratory, but because it is known and understood by engineers and technical men the world over. Furthermore, the special advantages of the metric system must be considered in relation to problems of standardization. It is the simplest system, starting with fundamental units of length and of mass. It is represented by appropriate standards of the highest scientific integrity and invariability. It is a complete and comprehensive system, for all forms of measurement can be developed, and it can be utilized in the definition of all forms of standards without recourse to arbitrary units or standards. And while the work of the metrologist involving, as it does, measurements as minute as the wave length of light, may seem but little related to the ordinary processes of manufacturing and engineering, yet the character of the prototype standards representing the units and the secondary and subordinate standards through which the general accuracy of any system of weights and measures is maintained, is by no means negligible. In the international metric system, the original standards have been determined and established as regards their accuracy, invariability, and permanence with greater precision than those of any other system, and what is more, they are interrelated with various national and other standards by the most intimate connections possible to modern science. The superiority of this interrelated system of metric standards to all others and especially to the Anglo-Saxon standards is so great that officially in the United States since April 5, 1893, the customary units are determined by their relation to the metric standards, and

not by a direct comparison with other standards of the same names, derived from Great Britain or elsewhere. This is a simple metrological fact. The international metric standards today represent with greater accuracy, invariability, and interchangeability, the abstract or ideal units of length and mass related to any and all other units of length or mass by some mathematical ratio than do any yard, gallon, or pound, or other standards. In other words, in the present condition of metrological science recourse must be had to the metric system for fundamental standards whatever the system of measurement, and today in the interest of precision all arbitrary standards of various systems must be defined in metric units.

Now the standards and the definitions prevailing in any industry may seem to the ordinary manufacturer, producer, or builder, very remote from his daily problems, and the fundamental standards of a system of weights and measures may be close to the vanishing point in the perspective of the worker, but it must be impressed that the connection must be maintained unbroken, and that where there is uncertainty as to standards or where there is variation, accurate work and interchangeability cannot be maintained. Naturally as a process becomes more general and universal, the exact correspondence with the standard grows less, but interchangeability is secured so long as proper limits of tolerance are not exceeded. A single standard properly defined and with tolerance limits stated makes for complete interchangeability in an industry or product.

It may be objected, that in the foregoing argument the order of the ordinary industrial process has been reversed, and it has been sought to derive standards for articles in common use from the refined fundamental standards of the scientists which possess a theoretical rather than practical interest. This in part may be admitted, and in part denied. In the older industries where there have been developed policies of standardization, this standardization came usually as a result of temporary needs and minimum adjustment, secured by small concessions or enforced conformation to the sizes and styles of one or more large manufacturers. In some industries in various countries, these systems have been developed with care and have served local or national needs. Now it is inevitable that where systems have developed in this way, they should become distinctly national, and their international acceptance is conditioned solely by the foreign trade of the country of their origin. As a result when several of these systems of stand-

ards come into competition, there is practically as bad a condition as if everything was specially designed and constructed without any pretense at standardization. Possibly any one of the various systems would answer were it possible to eliminate national and commercial prejudice and conform to it, but with the experience of all, it is safe to say that none is an ideal system.

Now as efficiency in all fields of activity is a ratio between the actual and the ideal, so in determining a standard we must aim as close as possible to the ideal. Consequently, the problem usually is to evolve an ideal system based on experience, but not necessarily confined to the practice of the past. In evolving an ideal system, it is not infrequently desirable to start afresh and utilize the various advances made in science and industry, since the former system or systems were developed on a fixed basis. It may be that in a battle of the standards one system may occupy such a predominant position as to warrant its international adoption. On the other hand, there can be little, if any, general approach to a complete standardization until entirely new standards are evolved by careful investigation of the conditions, scientific, technical, and economic. In such a case whatever the material or article may be, the aim at the very outset should be to secure an international and ideal standard, in which the best technical and commercial knowledge of the special art or industry concerned the world over should unite to secure the desired end.

Now unless any new or improved system of standards intended to be permanent is to be scientific (*i. e.*, exactly defined and specified, interrelated, and interchangeable) and international or susceptible of international use, there is but little advantage to be gained by its establishment, particularly at this time. Scientific accuracy is the keynote of industrial progress, and international trade is the field for future commercial prosperity. Consequently, as an essential in either case, standards defined in the metric system are essential.

It may be noted that the word *defined* is used, and at the present time, this should be borne in mind. Given an exact definition and knowing the ratio of different systems of weights and measures, articles or materials can be *made* in any system. Modern industry works to gage not to measurement, and will conform to any standards that can be defined.

The product must be adapted to the needs of the consumer, so

if these needs can be standardized, the markets of the world are thus opened.

Weights and measures have furnished a barrier between countries which partly can be overcome by cumbersome processes of conversions or equivalents, for the reduction of one system to the other, but sizes, styles, and qualities must conform to the usage of the consumer who will purchase where his requirements will be met. Therefore, it is necessary to consider all interests in this general policy and educate all to the advantages of common standards. International weights and measures must be the point of departure for any system or systems of international standards, and to secure the fullest and speediest realization of such international standards, the way first should be paved by the adoption and use of the metric system.

No longer are we living in the past, and owing to the war the great nations are so interrelated that in order to settle their financial dealings and their international indebtednesses, there must be the freest possible commerce. For the United States of to-morrow, the home market will no longer suffice, while the vast sums owing to America by Europe must be repaid in large part by commodities, crude and manufactured.

Now whatever the system of weights and measures in use in a country, there is inevitably progress towards standardization on some convenient basis. This naturally is a tendency of commercial civilization and is influenced by such consideration as the state of commercial evolution attained, and the ease of interchange of ideas and materials, that is telegraph, telephone, and land and sea transportation.

As distinct from international standards, it is inevitable that any less complete system of standardization will be based on local customs and practice, and there are likely to be as many systems of standards, as there are systems of weights and measures. Consequently, to secure harmony of standards, harmony and universality of weights and measures first must be secured, and the result is inevitable. Typical of this may be cited the case of electrical units and standards for years truly international and so maintained by international agreement. But here standardization has gone much further than mere units and definitions, for an international electrotechnical commission regulates international standardization, while standards committees of Great Britain and the United States are

seeking to secure the fullest possible measure of harmony even to a fair degree of detail in the standards and practice of the respective countries, quite apart from the question of fundamentals.

In brief then, our argument is that there is need of national standards where no standards exist, and of international standards where the separate countries have their own independent systems. In the present condition of industry, standards must be determined by practical men used to mass production or large-scale construction, working in coöperation with scientific men skilled in precise measurement, systematic research, and logical methods. Now to the so-called practical man of intelligence, and especially to the trained engineer, metric units whether used or not are at least familiar, and the advantage of exact definition to which they lend themselves, if not apparent, can be explained without difficulty. Consequently, it is most reasonable to ask that where manufacturers or others are formulating standards, that these be defined in the metric system, first, on the score of exactness of scientific statement; second, because of the wide range of the units of the system, and third, because American standards thus defined will be understood by the world at large.

As soon as all the materials of the world's industries are defined and measured in one and the same units, there will be an advance towards a more general standardization, and world's standards soon will be evolved. With international standards duly established, a manufacturer could then produce for a foreign market without any special changes of equipment or of types of product, and at the same time any surplus over that required for home consumption could be more readily disposed of abroad, if made to a standard that would meet also the requirement of distant nations.

Likewise in the event of a shortage of material in a home market, a consumer could draw his supply from abroad; provided he knew that the articles were truly standardized and in useful sizes and qualities suited to his needs. In other words, there would be established a world market for commodities, raw and finished products, once there was in universal use a single set of weights and measures to determine quantities exactly, and beyond the danger of misunderstanding.

It properly might be asked here why the metric system alone can promote this development of world standards and world trade. The answer is, that to-day it is the only international system and

that it is single and invariable. In the first place, it is the one and only system of science and exact measurement in every nation of the earth; and second, it is known and recognized in every civilized land whether it is used commercially or not. It is true that for certain articles and commodities, there are excellent and carefully observed standards based on Anglo-Saxon and other measures in Great Britain and the United States, but in few cases are these standards international or universal, or even interchangeable in the two nations, and not always so in even one of these countries, and its dependencies. There are differences in tons and hundredweights, in gallons, bushels, and quarts, in wire gauges and screw threads, in paper sizes, and structural shapes. Consequently there are many differences in sizes, quantities, and other standards inevitably based on the above, as well as those due to national and special practices. If international harmony and universal sizes and quantities are desirable, there must be secured agreement not only between International and Anglo-Saxon weights and measures, but first between the latter and the standards based thereon, as used in the various countries by which they are employed. Of course, if a manufacturer or merchant, or the citizens at large, of a country, wish to take a provincial view of the matter of foreign trade and international standards, or even of national standards, then there is nothing to be said, and each nation may endeavor to defy the spirit of progress in a vain attempt to force its own wares or its special exports on foreign nations. But in our changing industrial and international relations can any single nation to-day look forward to possessing such power ten years from now?

Those who advocate and urge the early adoption of the metric system in the English-speaking countries are firmly convinced that in no way can this important movement of international standardization and the cause of broadening international trade be more aided or further advanced than by its general establishment and use. It is with confidence that they can claim there will result no mechanical chaos, industrial confusion, or commercial disorganization. In fact, such claims are made upon the premise that metrological reforms, like industrial and mechanical progress, are distinctly evolutionary rather than revolutionary and represent advances toward the efficient and ideal. It is no more possible to abolish the employment of arbitrary weights and measures, or the use of unstandardized articles, by executive decree, or legislative act, than it is to eliminate inefficient

machinery by such a process. But the way can be pointed toward an ideal system, its introduction may be facilitated by wise statutes, and its general use established in such a manner as to convince all of the inevitable advantages that soon will result.

The metric system is not urged in connection with this movement for international standards with the idea of immediately displacing standards that have demonstrated their universality and their usefulness. Those standards can be defined and expressed in metric measurements even when they have not been developed along metric lines, but it is inevitable that where new and better standards must be determined or evolved, and especially an ideal and universal system, the metric system only should be used and should figure in the definition.

A temporary duplication of standards is but a transient evil, for one is bound to disappear and the ideal and international will prevail in a short space of time. That it will has been the verdict of industrial history the world over. Two standards can no more exist side by side than can two systems of money, and the inferior invariably gives way to the better. Is the metric system of weights and measures a better system? That is a question that has been affirmatively answered by scientists, by those who have had experience with other systems, as well, and finally by the undisputed record of the industrial progress of the nations by which it has been adopted. Consequently, if the same care is exercised in fitting mechanical and industrial standards on this basis, can there be any doubt that there will be not only international standards but the best standards from every standpoint? The expense involved will be small, but the returns will be great, returns not only material and substantial, but making for the highest development of industry and civilization.

METHODS OF MAKING SOYA-BEAN OIL IN MANCHURIA.[1]

Two processes are employed at Dairen for making oil from soya beans. One, known as the "extraction process," is a chemical method which, by the use of benzine, extracts the greatest amount of oil from the beans. When it is employed, not cake but bean meal

[1] Abstract of Report of A. A. Williamson, consul, Dairen, Commerce Reports.

is produced, and this is said to be preferred to cake for fertilizer, as it requires no breaking before it is used on fields. The oil, however, is said to sell for less than that produced by the "expression process," as it is difficult to remove all traces of benzine from the oil. The term soya-bean oil is generally understood to mean expressed oil.

Fifty-odd mills, large and small, are using the expression process at Dairen. Usually they are open to inspection upon proper introduction. Vertical presses of four columns of about 25 cakes per column are used, some mills having double presses—presses on two floors, one directly above the other and built as one machine, with the power applied at the same time in one operation. It is customary to work these presses by hydraulic power. They are displacing the old hand-power screw press.

When the beans are received at the mill they are generally frozen or very near it. After being sifted to remove such matters as stones, dirt, etc., they are kept for several days in a warm room, where they are turned over with shovels and thoroughly mixed from time to time. No magnetic cleaning is done at any of the mills except the chemical mill, which additionally uses this method. No particular temperature is aimed at, the object being simply to warm the beans so that the oil will be more easily freed. After they have been warmed for several days they are conveyed to the top of the crushers and run down through a series of cylindrical, smooth, or nearly smooth, iron rollers, which roll, not grind them. They emerge as disks, the size and shape of a dime. They fall from the rollers into a trough in which a screw conveyor is turning, and conveys them to the pressing floors, where they fall into bins.

The press gangs have ready squares of gunny-bag cloth, each of which holds a sufficient quantity of rolled beans to make a cake. The required quantity is scooped up and put into the cloth, which is then carried to the steam box. The cloth is spread out over the steam box, with the beans a couple of inches deep, and the steam is turned on and allowed to flow up through the mass for two or three minutes. The steam is not under pressure when applied, but escapes into the room, and no particular degree of temperature is aimed at, a thorough steaming being all that is desired, with the warming attained at the same time.

Meanwhile several more coolies, who work naked or with a loin cloth and sweatband only, have prepared the form. This consists

of an iron plate with two handles, upon which two iron rings, which will form the cake, are placed, and two bundles of long grass imported for the purpose from China are spread fanwise. Then a thin, wooden, circular frame, with ends not fastened together, is placed on the grass and forced down upon the plate inside the rings, the grass ends standing upright.

The steamed beans are brought from the steam box in the gunny cloth, and with one swing thrown into the form. A coolie, shod with the native footgear resembling a moccasin but heavier, jumps in, grasps a handhold overhead, and stamps the beans into a compact mass inside the form. He then stoops and raises the wooden holder slightly, pulls up the iron rings to their proper position, steps out, takes out the wooden frame, folds over the grass ends to form the top of the form and lays two flat iron bars thereon to hold the grass ends in place. Then two men take plate and all to a small auxiliary press where gentle pressure, sufficient to set the mass, is applied for a second or two; the plate with the cake on it is taken to the press; the cake shoved off the plate into one of the columns forming; and the plate brought back for another trip.

As soon as the press is full, top and bottom, a wooden post is inserted at the outer side to keep the cakes in position, and the signal is given to the engineer, who turns on the hydraulic power. The bottom of the press rises slowly and the oil immediately begins to flow. The first pressure is not great; and as the first flow subsides, more power is applied, but time must be given for the oil to run before much pressure is used. After several hours pressure, the oil having ceased to flow even after the maximum of 130 tons per 100 cakes has been applied for a number of hours, the press is opened, and the cakes are taken out and stripped of the iron rings with instruments similar to peavies. The grass also is removed. Coolies take the cakes between their knees, and rolling them forward in the operation, cut off the rims (the part squeezed out between the iron rings) with drawknives. This finishes the cake, which is then ready for storage and shipment.

The oil flows by gravity from the presses into receivers, from which it is pumped into storage tanks. It is first strained, and in the tanks it settles, and is drawn off so that the sediment is not taken with it. Tanks are cleaned frequently and have pipes to draw off sediment. No fuller's earth or clarifying clays are employed, nor is any other conditioning method used.

PHILADELPHIA COLLEGE OF PHARMACY.

Minutes of the Quarterly Meeting, December 31, 1917.

The quarterly meeting of the members of the Philadelphia College of Pharmacy was held this day at 4 P.M. in the Library, the President, Howard B. French, presiding. Seventeen members were present.

The minutes of the semi-annual meeting held September 24 were read and approved.

The minutes of the Board of Trustees for September, October, and November were read by the Registrar, J. S. Beetem, and approved.

The Secretary reported the death of Fred. F. Muller on June 29, 1917, at Los Angeles, California. He joined the college in 1870. Also the death of Doctor Charles T. George on December 26, 1917, at Harrisburg, Pa. He joined the college in 1895.

The resignation of Samuel C. Henry from membership in the Board of Trustees was presented, and, on motion, accepted with regret. Mr. Henry has removed to Chicago, to accept the secretaryship of the National Association of Retail Druggists.

Mr. George M. Beringer on behalf of Mrs. Charles H. LaWall presented to the college a photograph portrait of Professor LaWall, which was accepted and the thanks of the college voted to Mrs. LaWall.[1]

The President appointed the Committee on Legislation as follows: Theodore Campbell, chairman; Joseph P. Remington, William L. Cliffe, W. H. Poley, Richard H. Lackey and Charles H. LaWall.

C. A. Weidemann, M.D.,
Recording Secretary.

Minutes of the Special Meeting, January 2, 1918.

A special meeting of the members of the Philadelphia College of Pharmacy was held this day at 4 P.M. in the Library. About 40 members were present. The meeting was called to take action on the death of Professor Joseph P. Remington, which took place on the morning of January 1, at his city residence, 1832 Pine Street. Street.

President French in opening the meeting said that since the call for this special meeting was issued it was thought best to adjourn

[1] For reproduction see this Journal, January, page 42.

this meeting and to hold a memorial service for Professor Remington on Friday afternoon, January 4, at 3 P.M., following the funeral services that would be held at Holy Trinity Church at one o'clock of that day. He had been informed that many of the friends and associates of Professor Remington from different parts of the country would be in the city to attend the funeral services and these would be glad to have the opportunity to attend and to express their appreciation, to testify to the loss they and all of us had sustained by his death.

Mr. Mulford moved that we adjourn to 3 P.M. of Friday, January 4, and that a committee be appointed to draft appropriate resolutions to the memory of Professor Remington, and that a suitable notice be issued for the meeting. After remarks on the motion by C. Stanley French, Professors LaWall and Cook, it was agreed to.

Professor LaWall moved that the entrance to the college be draped in mourning for the space of thirty days. Agreed to.

The President appointed the following members as the Committee on Memorial Resolutions: Joseph W. England, chairman; H. K. Mulford, Samuel P. Sadtler, Charles H. LaWall, J. W. Sturmer.

C. A. WEIDEMANN, M.D.,
Recording Secretary.

MINUTES OF THE ADJOURNED SPECIAL MEETING,[1] JANUARY 4, 1918.

The following invitation was mailed to members of the College, members of various pharmaceutical organizations and to the friends and associates of Professor Joseph P. Remington.

"You are respectfully invited to attend an adjourned meeting of the College, at which will be conducted a

Memorial Service

in memory of the late

Professor Joseph Price Remington

on Friday afternoon, three o'clock, January fourth, one thousand nine hundred and eighteen, at the Philadelphia College of Pharmacy.

About two hundred persons were present when the President, Howard B. French, called the meeting to order. He said the College had met in special session on Tuesday, January 2, to take action on the death of Professor Remington, but had adjourned

[1] A complete report of this meeting is published on page 79.

after a very short session and arranged for this memorial service to-day.

Telegrams were then read from George F. Payne, of Atlanta, Georgia, Professor Henry Kraemer, of the University of Michigan, G. A. Barbridge, of Nova Scotia, Samuel W. Fairchild and Professor Virgil A. Coblentz, of New York.

A communication from George M. Beringer, chairman of the board of trustees, who was unable to be present, was then read by the Secretary.

The memorial resolutions adopted by the Pennsylvania Pharmaceutical Association were then read by the Secretary.

The resolutions and minutes of appreciation as prepared by the committee appointed by the college were then read by the chairman, Joseph W. England.

After the conclusion of the reading Professor E. G. Eberle moved that we acknowledge this memorial as the sentiment of this meeting, and that it be adopted by a rising vote, which was unanimously carried. Resolutions adopted by the Faculty of the College, and by the Philadelphia Branch of the American Pharmaceutical Association were next read.

President French then called on a number of gentlemen present to give expression to their appreciation of and esteem for Professor Remington. Professor Samuel P. Sadtler, an associate of Professor Remington for many years, was the first speaker. Professor Sadtler's remarks were a loving tribute, as were the many others, who followed. President French followed with his appreciation of the character of Professor Remington and his services in behalf of the college. Professor J. W. Sturmer, associate dean; Dr. H. W. Wiley, president of the U. S. Pharmacopœial Convention; Mr. Samuel L. Hilton, treasures of the Convention; Dr. H. C. Wood, vice-chairman Committee of Revision of the Pharmacopœia; J. A. Koch, professor of pharmacy, Pittsburgh College of Pharmacy; Joseph L. Lemberger, vice-president Philadelphia College of Pharmacy; Harry Vin Arny, professor of chemistry, New York College of Pharmacy; Caswell A. Mayo, editor *American Druggist;* E. G. Eberle, editor *Journal of the American Pharmaceutical Association;* Charles H. LaWall, associate professor of pharmacy, Philadelphia College of Pharmacy; C. B. Lowe, professor of materia medica, Philadelphia College of Pharmacy; E. Fullerton Cook, associate director of pharmaceutical laboratory, Philadelphia College of

Pharmacy; F. X. Moerk, professor of analytical chemistry, Philadelphia College of Pharmacy; Dr. F. E. Stewart and Dr. P. S. Stout, were among those who feelingly expressed the loss to pharmacy and their personal appreciation of the services of this great teacher of pharmists.

Before adjournment a number of telegrams from prominent pharmacists throughout the United States and Canada were read.

C. A. WEIDEMANN, M.D.,
Recording Secretary.

CORRESPONDENCE.

TREASURY DEPARTMENT,
UNITED STATES PUBLIC HEALTH SERVICE,
OFFICE OF HYGIENIC LABORATORY.
WASHINGTON.
January 11, 1918.

THE EDITOR, AMERICAN JOURNAL OF PHARMACY,
Philadelphia, Pa.

Dear Sir: Of late, the hygienic laboratory has received a number of inquiries, the purpose of which was to determine whether or not work on the compilation of "Digest of Comments on the United States Pharmacopœia and National Formulary" was being continued. In order that all of those who are interested may be correctly informed in regard to this matter, the accompanying notice has been drawn up. The publication of the same in your journal at an early date would be appreciated.

Thanking you in advance for the courtesy, I am

Sincerely yours,
G. W. McCOY,
Director.

COMPILATION OF DIGEST OF COMMENTS ON THE U. S. P. AND N. F. CONTINUED.

The work of compiling the series of hygienic laboratory bulletins entitled "Digest of Comments on the Pharmacopœia of the United States of America and on the National Formulary," which was interrupted by the illness and death of technical assistant, Martin I. Wilbert, has been resumed by A. G. DuMez, who was appointed

to succeed the former June 1, 1917. The Digest of Comments for the calendar year ending December 31, 1915, has been completed and is ready for publication, and considerable progress has been made in the preparation of the abstracts for the 1916 bulletin.

DEPARTMENT OF AGRICULTURE,
BUREAU OF CHEMISTRY,
WASHINGTON, D. C.,
January 11, 1918.

DR. GEORGE M. BERINGER, EDITOR,
AMERICAN JOURNAL OF PHARMACY,
145 North Tenth Street,
Philadelphia, Pa.

Dear Doctor Beringer: My attention has just been called to the November, 1917, issue of the AMERICAN JOURNAL OF PHARMACY, in which you have reprinted a number of the Service and Regulatory Announcements of this Bureau of interest to the drug trade. I am pleased to note that you have published them in your journal and thus assisted in the dissemination of the information contained in them.

I would like, however, to call your attention to an error which appeared in the Service and Regulatory Announcement regarding the method for the determination of volatile oil in mustard seed. The copy supplied by this Bureau to the printer, and also the galley proof returned, were correct, but for some unexplainable reason the proof was changed again in the printing office. In the last sentence the word *"gram"* should be substituted for "grain." The revised sentence would then read: "Each mil of 0.1 N silver nitrate consumed equals 0.004956 gram of allylisothiocyanate." I would appreciate it if you would make this correction in an early issue of your journal.

Very truly yours,
C. L. ALSBERG,
Chief.

The attention of the subscribers and readers of the AMERICAN JOURNAL OF PHARMACY is directed to this error with the request that they promptly note and correct same on the printed page.

EDITOR.

BOOK REVIEWS.

THE PRACTICE OF PHARMACY: A TREATISE ON THE MODES OF MAKING AND DISPENSING OFFICIAL, UNOFFICIAL, AND EXTEMPORANEOUS PREPARATIONS, WITH DESCRIPTIONS OF MEDICINAL SUBSTANCES, THEIR PROPERTIES, USES, AND DOSES. A Handbook for Pharmacists and Physicians and a Text-book for Students. Sixth Edition. By Joseph P. Remington, Ph.M., Phar.D., F.C.S., assisted by E. Fullerton Cook, P.D. With over Eight Hundred Illustrations. Publishers, J. B. Lippincott Company, Philadelphia and London. Vols. I and II, Regular Cloth Binding, each $4.50 net One Volume complete, bound in Buckram, $8.00 net.

The sixth edition of this master work on pharmacy in the English language was necessitated by the publication of the Ninth Revision of the United States Pharmacopœia and the Fourth Edition of the National Formulary. All of the important statements in these two national legal standards for drugs have been incorporated in the volume now before us. The attempt to produce a work on pharmacy that would be up to date and comprehensive in evidenced throughout its pages. The preëminent ability and long experience as a teacher enabled the author to present in his characteristic clear and logical style the subject-matter in an interesting and inviting manner in this instructive book.

In this edition, the arrangement follows closely that of the previous editions. The "Introductory" in rather terse language presents pharmaceutical terms, definitions and explanations of the authority of pharmacopœias, formularies and the several commentaries on these; but the very clarity of the statements invites the careful perusal of the student. Metrology rightly receives early and a clear exposition in the pages of the book. This knowledge so essential to the practice of either medicine or pharmacy and which, too frequently, has proven a perplexing stumbling block to the student, is here so presented that the student who masters this chapter cannot fail to have a clear conception and understanding of the subject.

The tabulations of the various classes of galenicals and of the drug and chemical products is a feature that has been very generally adopted by teachers of pharmacy since the early works of Procter and Parrish and is extensively used in this edition. These bird-eye views of subjects as shown in very many of the chapters will

prove a great aid to the student by presenting a comprehensive scheme for facilitating the acquiring of the knowledge. The questions following each chapter will likewise prove beneficial by enabling him to determine at once what part of the content of the chapter he has failed to acquire.

The book is exceptionally free from typographical errors and a critical examination reveals but very few statements of facts to which one can take exception. There are, however, a few "slips" to which attention should be called. For example on page 1,051, Spiritus Frumenti is designated as "U. S.," although the author was well aware that whisky had been deleted from the pharmacopœia. In this connection we likewise note that the tests of the U. S. P. VIII are given despite the fact that their reliability was questioned and improvements published.

The author was such an expert in explaining to his classes the various processes of percolation that we are disappointed in noting the scant consideration that is given to the process of "Fractional Percolation" as proposed by the late Professor C. Lewis Diehl and the modification of this excellent process adopted in the U. S. P. IX and to the differentiation between this and "Repercolation." Oldberg is, likewise, given credit for a style of percolator which was described much earlier by Diehl.

On page 1251, in discussing Sapo Mollis U. S. P. IX, the author states: "The new soap is light yelow in color and the usual synonym 'Green Soap' cannot, therefore, be properly applied." Nevertheless in the same article on the same page we are told under "Uses: *Green soap* is used in skin diseases."

Although the author repeats in his work the "Type Processes" for Fluidextracts and Tinctures as adopted by the U. S. P. IX in order to save useless repetition and waste of space, he prints in each formula full directions, following the style of the U. S. P. VIII. The reason for this is not apparent, unless it was deemed desirable to do so because of the plan adopted throughout the entire volume of giving in each formula alternative quantities, the official formulas being designated as "Metric" and the transpositions in Apothecaries' Weight and Measure as "Old Form."

Any one who has attempted to classify drugs in accordance with their constituents will recognize the peculiar difficulties and problems that arise. The attempt to include in this work all of the

drugs of the U. S. P. and N. F., and under such classifications, as could be expected has led to some incongruities.

The illustrations are numerous and usually quite appropriate. We would not, however, recommend the adoption of the apparatus as figured on page 220 (Fig. 265) for the manufacture of chlorine water. Many of the figures of apparatus show machinery suited for the manufacturer as well as the small types of machines suitable for the purposes of the retail dealer and this is a commendable feature of the book.

The sixth edition of this standard work not only maintains the standing and reputation of the preceding editions but excels these in comprehensive up-to-date treatment of the theories and practices of pharmacy. It should serve not only as the leading textbook for the student but should be a book of continuous use and daily reference in every pharmacy.

G. M. B.

AMERICAN POCKET MEDICAL DICTIONARY, edited by W. A. Newman Dorland, A.M., M.D. Tenth Edition, Revised, Philadelphia and London: W. B. Saunders Co., 1917.

This useful adjunct to the physician is too well known to require detailed description as to its advantages and uses. It consists of a pocket-sized book, substantially bound in a flexible cover, and contains 671 pages of definitions and tables, all of which are intended to have particular relevance and value in connection with the practice of medicine and surgery. There is much to commend and but little to criticize.

The only criticism that is at all applicable is that although it has been revised up to September, 1917, a number of important terms are not defined. For instance, the word "Wassermann" does not appear in the alphabetical list, but the reaction is described under the list of reactions, not being cross-indexed under the name of its author, as is done in other cases.

Although the war terms seem to have been well covered, no reference is made to gas gangrene, nor to Carrel-Dakin solution, although the Dakin solution is rather incompletely and unsatisfactorily defined as a solution containing washing soda, chlorinated lime and boric acid, used in irrigating wounds.

The most serious omission is in not cross-indexing a number of important remedial agents under their chemical names or the names under which they are officially known in the U. S. Pharmacopœia.

Among these may be mentioned acetyl salicylic acid, ethyl morphine, beta eucaine, bismuth betanaphtholate and diacetyl morphine.

These oversights will doubtless be corrected in the next printing and need not seriously detract from the everyday value of a book which should be owned not only by every physician but by every pharmacist and chemist as well.

CHARLES H. LAWALL.

THE CHEMIST AND DRUGGIST DIARY FOR 1918. 50th Year of Publication.

This is a handy desk companion giving in its necessarily restricted space authentic information on many subjects of present interest to the drug trade. The contents are classified under appropriate headings and with the index makes ready reference possible.

The Trade Directory is an alphabetical list of business houses dealing in drugs, chemicals, pharmaceuticals, sundries and allied products and gives for each firm the address, telephone number and cable address (if any) and a list of the principal products marketed.

The Buyer's Guide is a classified list of articles with the names of the producers appearing in the Trade Directory.

The Chemist's Calendar consists of short, descriptive chapters of the popular ideas of the characters of the month and of the medicines that may be needed with a selection of formulas for these. The formulas take a very wide range from cosmetics to "blood purifiers," from chilblain paint to emulsions of cod-liver oil.

This is followed by pages containing a diary with titles of the months and days in Latin, and the English in brackets, with a space for daily notations, and the reader is advised to "Cultivate the diary habit and save yourself much mental worry."

Not the least important part of this desk book are the pages devoted to Military Hospitals Formulary, in which is found a selection of the formulas found useful in the present world war.

In short chapters are presented the important features of the British Income Tax and Stamp Duties, Schedules of Poisons, Cocaine and Opium Regulations and a table of comparative prices of the more important drugs and chemicals at various periods since the outbreak of hostilities in 1914, list of preparations withdrawn from the British Pharmacopœia because of the war, Postal Information, etc.

The 92 pages contain much that will be of daily service to the busy druggists of the British Isles. G. M. B.

ANNUAL REPORT OF THE SURGEON-GENERAL OF THE PUBLIC HEALTH SERVICE OF THE UNITED STATES FOR THE FISCAL YEAR OF 1917.

This report which is a book of 387 pages covers an extensive field of work, and attests to the efficiency of the Public Health Service presided over by Surgeon-General Blue.

It is impossible in a brief article to even mention by title the list of activities of this service, only a few can be mentioned.

Pellagra, which has prevailed extensively in parts of the South, is supposed to be caused by eating damaged maize. As studied in some asylums it has been found to be entirely preventable by proper diet. It has been possible to transmit the disease by inoculation.

Trachoma, a disease of the eyes leading to blindness, has been treated in two hospitals established in the Appalachian Mountains. As the disease was a formidable enemy in the Russo-Japanese War, it is recommended that the eyelids of all recruits be examined, especially in some parts of the South.

Health conditions surrounding employees, both women and men, have been closely studied. The mental and physical status of school children in various parts of the country have been studied, especially in New Castle and Sussex counties of Delaware, numbers of feeble-minded children thus being brought to light.

In the report of the hygienic laboratory, the death of Dr. Martin I. Wilbert is mentioned.

The Division of Pharmacology has examined wild-grown digitalis from Oregon and has been found that it complied with the requirements of the U. S. Pharmacopœia for strength. It is claimed as the result of considerable work done on cannabis that the methods adopted by the U. S. Pharmacopœia (9th edition) for testing this drug did not always yield satisfactory results.

In view of some unfavorable reports concerning the toxicity of salvarsan and analogous compounds, it is now under careful study.

The quarantine work carried on along the Mexican-Texas border is both extensive and important; they are constantly on the look out for typhus fever, the importance of it being shown by the fact that in the city of Zacatecas, Mex., in 4 months of 1917 there were 2,000 deaths from this disease in a population of 60,000.

Very complete equipments are maintained along this border for ridding the imigrants (Mexican laborers, etc.) of vermin.

For destroying headlice on men and boys, the hair is clipped, placed on newspapers and burned. In the case of women and girls the hair was treated with an equal mixture of kerosene and vinegar for half an hour, afterwards given a washing with warm water and soap.

In the fumigation of vessels and the destruction of rats, cyanide gas was far more efficient than sulphur dioxide. By compliance with the regulations established for cyanide fumigation 900 vessels have been so treated without an accident.

A large part of the book is taken up with reports from the quarantine stations maintained by the United States which prevent the entrance into our country of various diseases, many of them of a malignant character, thus safeguarding the health of every citizen.

Under the head of Domestic (Interstate) Quarantine an interesting account is given of the assistance given by the Public Health Service in the effort to control poliomyelitis (infantile paralysis) in different parts of the eastern United States.

C. B. Lowe, M.D.

NEWS ITEMS AND PERSONAL NOTICES.

The College Service Flag.—A service flag displayed at the Philadelphia College of Pharmacy shows that one hundred and fifty-three of the graduates of this college are already enlisted in the military service of the United States.

Professor Remington's Scientific Library.—This entire branch of his extensive private library was bequeathed to his two associates in the department of pharmacy at the college, Professors Charles H. Lawall and E. Fullerton Cook, to be divided equally between them. This contains many volumes of historic value as well as of scientific interest. For the present, this will be preserved intact in the pharmacy department as a reference library for the students engaged therein and will be catalogued by the librarian of the college as an adjunct library of the college.

The Lily Scientific Bulletin.—Number 8 of the first series of these contributions, published by Eli Lily & Company of Indianapolis, has just been received. The papers contained present sev-

eral creditable pieces of research work carried on by the scientific division of the laboratories.

The Jacobs' Pharmacy Co., of Atlanta, Ga., announce that twenty-seven of their employees have answered the country's call and entered the governmental service. This shortage of competent help has compelled this company to reduce the hours of service in two of their principal stores.

The National Pharmaceutical Service Association, out of respect to the memory and services of Professor Remington, cancelled the January meeting. This Association is energetically carrying on the propaganda in favor of the Edmond's Bill now pending in Congress to provide a Pharmaceutical Corps in the United States Army. A committee of the prominent members will attend the hearing on this measure before the Committee on Military Affairs of the House of Representatives.

OBITUARY.

CHARLES T. GEORGE. Died at his home in Harrisburg on December 26, in the seventy-third year of his life. He was born in Homberg, Hesse, Germany, on February 2, 1845, and came to America when but six years of age. His education was acquired in the public schools of Harrisburg. He entered a drug store early in his youth, and, shortly after arriving at his majority, he engaged in the drug business on his own account. For years he was a prominent figure in the pharmaceutical circles in Pennsylvania. He was one of the charter members of the State Association organized in 1878 and was elected as the president of the Association in 1885.

He served as a member of the Board of Pharmacy of Pennsylvania and was secretary thereof for many years. He joined the American Pharmaceutical Association in 1873 and the Philadelphia College of Pharmacy in 1895, becoming a life member of this organization and an honorary member of the Alumni Association. He was for some time a school director in Harrisburg. He was likewise prominent in Masonic circles and in the Lutheran church.

SAMUEL L. BINES. Died at his residence in George's Hill, West Philadelphia, on December 20, 1917, at the ripe age of eighty-nine years. Mr. Bines graduated from the Philadelphia College of Pharmacy in 1848, and prior to his decease was the oldest living member of the Alumni Association.

FREDERICK L. UPJOHN. Died at his home in Huntington, L. I., on December 1, 1917, and was sixty years old. He was the son of Dr. Uriah Upjohn. He received his early education and part of his pharmaceutical education in Michigan and attended the Philadelphia College of Pharmacy for one year. He became a member of the College in 1897. After completion of his college training, he managed the New York branch of the Upjohn Co. for upwards of twenty years.